# Round 1 Corrective Action Groundwater Monitoring Report

Tank 38
Tank Farm 4

Naval Education and Training Center Newport, Rhode Island



Northern Division
Naval Facilities Engineering Command
Contract Number N62472-90-D-1298
Contract Task Order 0143

October 1998



#### **ROUND 1 CORRECTIVE ACTION GROUNDWATER MONITORING REPORT**

#### **TANK 38 TANK FARM 4**

#### **NAVAL EDUCATION AND TRAINING CENTER NEWPORT, RHODE ISLAND**

#### **COMPREHENSIVE LONG-TERM ENVIRONMENTAL ACTION NAVY (CLEAN) CONTRACT**

Submitted to: **Northern Division Environmental Branch, Code 1812BJH Naval Facilities Engineering Command** 10 Industrial Highway, Mail Stop # 2 Lester, Pennsylvania 19113-2090

Submitted by: Tetra Tech NUS, Inc. 600 Clark Avenue, Suite 3 King of Prussia, Pennsylvania 19406-1433

Contract Number N62472-90-D-1298 "CLEAN" Contract Task Order 0143

October 1998

PREPARED BY:

APPROVED BY:

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WILMINGTON, MASSACHUSETTS

**PROGRAM MANAGER** 

**TETRA TECH NUS, INC.** 

KING OF PRUSSIA, PENNSYLVANIA

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#### 1.0 INTRODUCTION

This report summarizes the results of the Round 1 corrective action groundwater monitoring event for Tank 38 at Tank Farm 4, located at the Naval Education Training Center (NETC), Newport, Rhode Island. The tank is identified as Tank 38 (FACID-3644TNO-38). Groundwater monitoring is conducted as part of the corrective action responding to petroleum releases at the tank, as required by the Rhode Island Department of Environmental Management (RIDEM) Underground Storage Tank Section Regulations (DEM-DWM-UST05-93, Sections 14.11 and 14.12). Under this effort, one well, MW-605, was installed to monitor the potential migration of impacted groundwater and residual product downgradient of Tank 38, as proposed in the Site Investigation Report for Tanks 38, 42, 45, and 48, Tank Farm 4, submitted April 1996.

Tetra Tech NUS Inc. (TtNUS), formerly Brown and Root Environmental, prepared this summary report at the request of the United States Navy, Northern Division (NORTHDIV) of the Naval Facilities Engineering Command (NAVFAC) under Contract Task Order 143 of the Comprehensive Long-Term Environmental Action Navy (CLEAN) Contract No. N62472-90-D-1298.

NETC Newport is located in the Towns of Middletown and Portsmouth, Rhode Island, and the City of Newport, Rhode Island, approximately 25 miles southeast of Providence. Tank Farm 4 is situated in the north-central portion of the NETC, in Portsmouth, Rhode Island. Tank 38 is located on the northern portion of Tank Farm 4 approximately midway up the rising slope that is the predominant physical feature at the tank farm.

Tanks at Tank Farm 4, including Tank 38, were demolished during 1997. The tanks were imploded individually; the demolition objective was to collapse and separate the tank roof from the tank walls while maintaining the basic structural integrity of the tank floor and side walls. A 15-foot layer of sand was placed in the tank to absorb the shock from the collapsing tank roof and to fill voids between the tank floor and roof. Ballast water was removed from the tanks and pump rooms as the sand was placed. Following tank demolition, each tank site was backfilled with certified clean fill, and surveyed to identify the location.

The demolition activities resulted in damage or destruction of the monitoring wells installed at Tank 38 during previous site investigations. Monitoring well repair and abandonment activities were subsequently conducted during June 1998, as discussed in Section 2.1.

#### 2.0 RESULTS

This section presents a discussion of the Tank 38 corrective action monitoring well (MW-605) siting, installation, and development; water level measurements and purging activities; sampling and analysis; analytical results, and results comparison to class GA groundwater standards.

#### 2.1 MONITORING WELL SITING, INSTALLATION AND DEVELOPMENT

MW-605 was installed at a location downgradient of Tank 38 based on a groundwater map depicting groundwater levels that were measured on August 19, 1996 (Figure 2-1). According to Mr. Mark Gouvia of Foster/Wheeler, on August 19, only the Tank 48 ring drain was being pumped. Based on previously observed groundwater levels at Tank Farm 4 and the nearly 1600 foot separation of Tank 38 and Tank 48, ring drain pumping at Tank 48 would have no or little impact on groundwater levels near Tank 38.

Between June 12 and June 15, 1998, TtNUS personnel supervised the drilling and installation of MW-605 at Tank 38 (Figure 2-2), concurrent with the Tank Farm 4 Supplemental Site Investigation (SSI) field investigation following Tank Farm 4 tank demolition activities. The soil boring (SB-605) was drilled to a depth of 18 feet below ground surface (bgs), with the top of weathered bedrock encountered at approximately 16 feet bgs. No sign of petroleum impacts was observed on visual inspection of subsurface soil samples and wash water during drilling. No positive detections with flame ionization detector (FID) of jar head-space samples were noted.

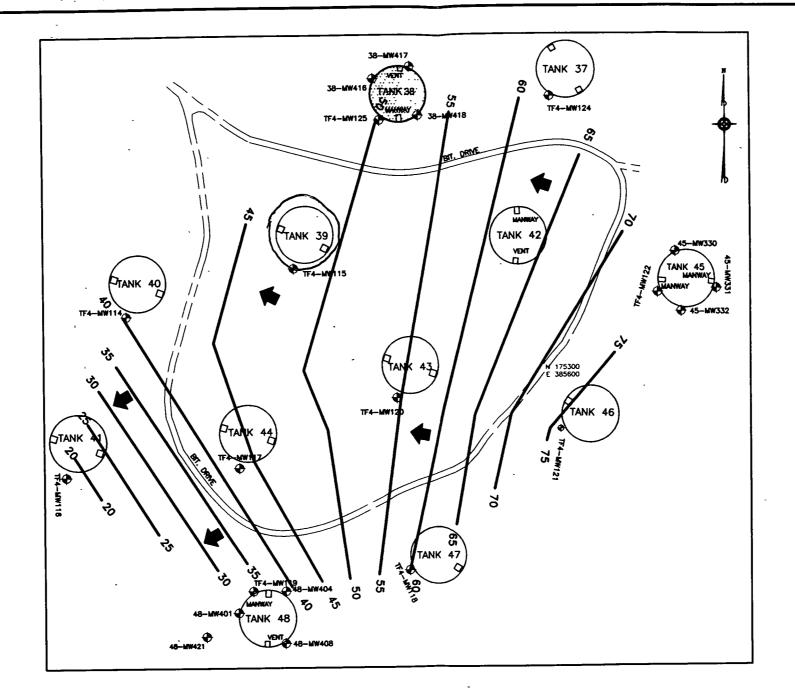
MW-605 was constructed in accordance with the requirements for overburden wells stated in the Final Work Plan, dated September 1994 (with addenda). A nominal 2-inch I.D. PVC well was installed in the boring; a 10-foot well screen straddled the water table to allow for seasonal fluctuations. Boring and well construction logs for MW-605 are presented in Appendices A and B, respectively. The work also included repairs to wells damaged during the tank demolition and abandonment of wells destroyed during the tank demolition. One previously installed monitoring well at Tank 38, MW-418, was repaired and re-developed after being damaged during tank farm demolition activities. All other previously installed monitoring wells at Tank 38 (MW-125, MW-416, and MW-417) were destroyed during tank farm closure activities and have been properly abandoned.

#### LEGEND

MONITORING WELL LOCATION WITH IDENTIFIER

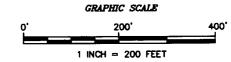
INTERPRETED GROUNDVATER CONTOUR LINE

INTERPRETED GROUNDVATER FLOW DIRECTION



#### GROUNDWATER ELEVATIONS (AUGUST 19, 1996)

I. D.	GW ELEV.
TF4-MV 124	61.86 (DIL)
TF4-MV 125	49. 97 (DIL)
TF4-MW 114	40. 43
TF4-MW 116	17. 28
TF4-MW 117	43. 66
TF4-MW 118	60. 05
TF4-MV 119	32. 57
TF4-MW 120	54, 89
TF4-MW 121	76. 50
TF4-MW 122	73. 91



- 1) BASE MAP FROM PLAN BY LOUIS FEDERICI & ASSOCIATES, 235 PROMENADE STREET, PROVIDENCE, RI & AVAILABLE PLANS.
  2) BITUMINOUS DRIVE LOCATION FROM ABOVE PLAN & AVAILABLE PLANS AND IS TO BE CONSIDERED APPROXIMATE.
  3) GRID COURDINATES BASED ON THE STATE OF RHODE ISLAND GRID COURDINATE SYSTEM (NAD 1983).

- 4) THE OBSERVED GROUNDWATER ELEVATIONS MAY DIFFER FROM ACTUAL CONDITIONS DUE TO TANK
- CLEANING ACTIVITIES AT TANKS NO. 's 45 AND 48.
- 5) ALL LOCATIONS TO BE CONSIDERED APPROXIMATE
- 6) PLAN NOT TO BE USED FOR DESIGN.

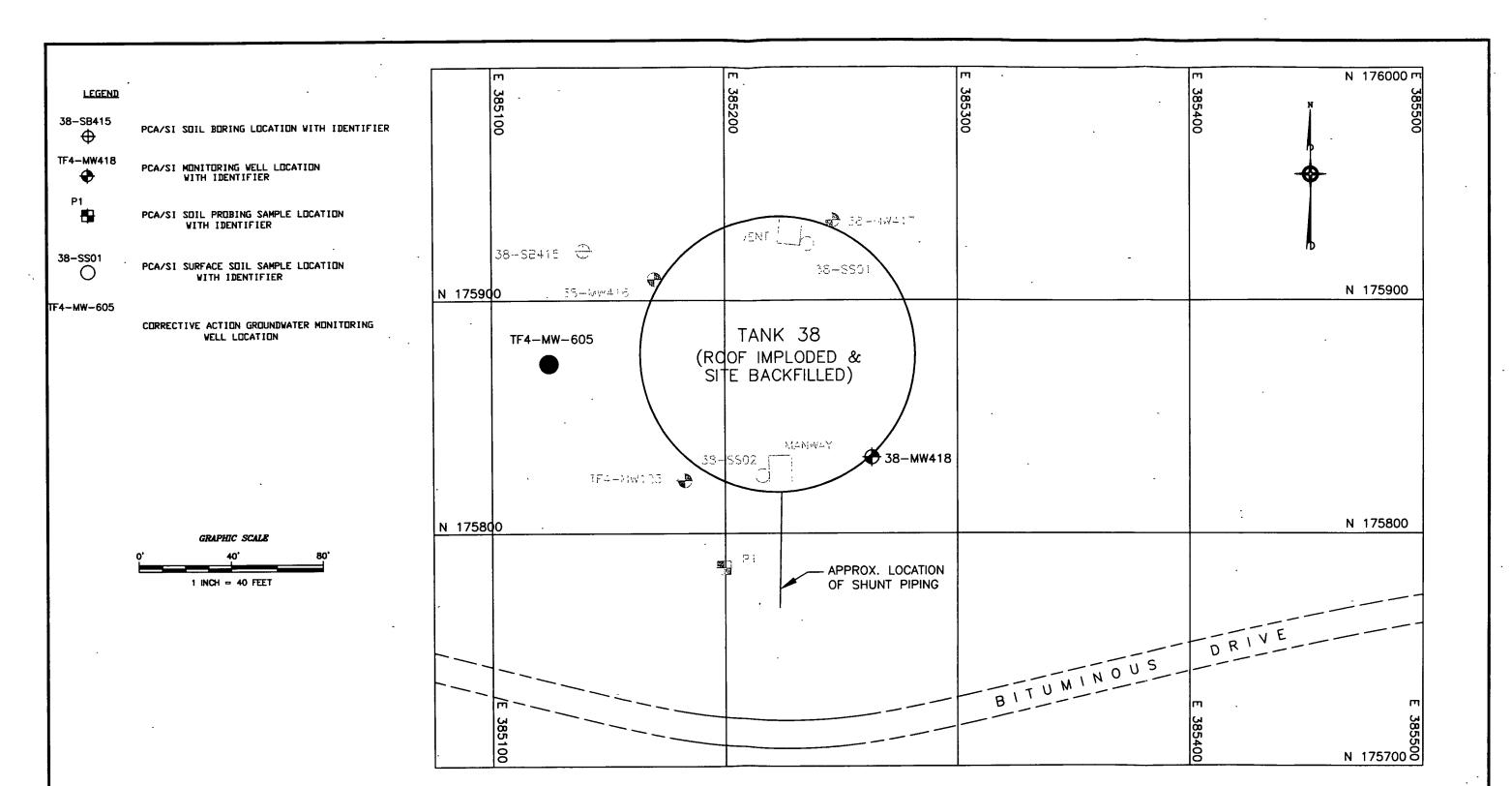
	INTERPRETED	WATER TA	BLE MAP
TANK F	ARM 4 -	NETC -	NEWPORT, RI
TANK 38 R			DWATER MONITORING REPORT
DRAWN BY:	R.G. DEWSNAP	REV.:	0
CHECKED BY:	M. HEALEY	DATE:	30 SEP 98
SCALE:	1" = 200'	FILE NO.: DWG	CVIETC\CAP\TANK_38\H20_TABL

FIGURE 2-1

TETRA TECH NUS, INC.

55 Jonspin Road

Wilmington, MA 01887 (508)658-7899



#### NOTES

- 1) PLAN NOT TO BE USED FOR DESIGN.
- 2) LOCATIONS FROM BASE MAP BY LOUIS FEDERICI & ASSOCIATES, 235 PROMENADE STREET, PROVIDENCE, RI.
- 3) GRID COURDINATES BASED ON THE STATE OF RHODE ISLAND GRID COORDINATE SYSTEM (NAD 1983).
- 4) FORMER SAMPLE LOCATIONS SHOWN IN THE COLOR GRAY, MONITORING VELLS HAVE BEEN ABANDONED.

	MW 605 LOCA	TION -	TANK 38	FIGURE 2-2
			- NEWPORT, RI	TETRA TECH NUS, INC.
DRAWN BY:	R.G. DEWSNAP	REV.:	0	
CHECKED BY:	T. DORGAN	DATE:	30 SEP 98	55 Jonspin Road Wilmington, MA 01887
SCALE:	1" = 40'	FILE NO.: DV	IG\NETC\CAP\TANK_38\MW_LOCAT	(508)658-7899

Well development occurred at MW-605 on June 18 and 19, 1998. The well was developed by surging and pumping consecutively, but was purged dry many times over 2 days and was very slow to recover. No indications of petroleum in the purged groundwater was noted during well development.

The horizontal and vertical locations of the newly installed and repaired wells at the tank farm were surveyed on July 9, 1998 by Louis Federici and Associates of Providence, Rhode Island. Survey results stamped by Mr. Louis Federici, Rhode Island Land Surveying Registration Number 1646, are provided in Appendix C.

#### 2.2 WATER LEVEL MEASUREMENTS AND PURGING ACTIVITIES

On July 7, 1998, TtNUS personnel used an electronic water level indicator to measure the depth to groundwater in the newly installed monitoring well and MW-418. All measurements were taken with respect to the top of the PVC riser. Tank 38 monitoring well groundwater level data are presented in Table 2-1.

MW-605 was purged dry on June 8, 1998, using a disposable polyethylene bailer affixed to polyethylene rope. As the well was purged, temperature, specific conductance, pH, dissolved oxygen, salinity, and turbidity were measured using a Horiba U-10 water quality meter to determine the groundwater chemistry prior to sampling.

#### 2.3 SAMPLE SUMMARY AND ANALYTICAL RESULTS

As part of the Tank Farm 4 SSI groundwater sampling event, and after allowing the well to recover from being purged dry on July 8, 1998, groundwater samples were collected from MW-605 on July 9, 1998. The bailer was lowered into the well to the midpoint of the well screen. Groundwater samples were collected and poured directly into pre-preserved sample bottles. An aliquot of the sample was field-filtered for dissolved metals determination. A field duplicate was collected from MW-424 (Tank 48). In addition, a rinsate blank and a source blank were collected for field quality control checks. Sample log sheets are presented in Appendix D.

# TABLE 2-1 TANK 38 GROUNDWATER LEVEL MEASUREMENTS (JULY 7, 1998) TANK 38 ROUND 1 CORRECTIVE ACTION GROUNDWATER MONITORING (JULY 1998) TANK FARM 4 NETC-NEWPORT, RHODE ISLAND

Tank No.	Well ID No.	Depth to water (ft.)	Elevation top PVC riser (ft. mlw)	Groundwater elevation (ft. mlw)
38	MW-418	14.58	72.23	57.65
38	MW-605	9.61	65.80	56.19

Notes:

mlw - mean low water

All samples were properly packed in a cooler with ice, and sealed and shipped overnight under chain of custody to Mitkem Corporation of Warwick, Rhode Island, an NFESC-approved laboratory for analysis. The groundwater sample and required QC samples were analyzed for the following:

- Volatile organic compounds (VOCs) by Method 8260
- Semi-volatile organic compounds (SVOCs) by Method 8270
- RCRA metals by Method 6010 (unfiltered and field-filtered samples)
- TPH by Method 418.1

Analytical results were reviewed based on holding times, applicable laboratory and field blank and duplicate results, and matrix spike/matrix spike duplicate results. Laboratory analytical results for the MW-605 groundwater sample are presented in Appendix E. Results of the Tank 38 Corrective Action /Tank Farm 4 SSI groundwater sampling event analytical data review, along with complete analytical results, are also provided in Appendix E.

Blank contamination was present for the metals arsenic, barium, cadmium, chromium, silver, and mercury. Positive results for these metals may be biased high or be false positive values. In addition, blank contamination was found for diethyphthalate, acetone, carbon disulfide, methylene chloride, and naphthalene. Positive results for these compounds may be biased high or be false positive values. Low field duplicate precision for TPH was found; the low field duplicate precision may be due to sample heterogeneity.

No volatile organic compounds or semi-volatile organic compounds were detected in the MW-605 sample. TPH was not detected in the sample. Three of the eight RCRA metals (barium, cadmium, and silver) were detected in the total metals and the dissolved metals samples.

#### 2.4 COMPARISON TO GA GROUNDWATER STANDARDS

The Tank 38 Round 1 corrective action groundwater monitoring results were compared to RIDEM Class GA groundwater quality standards and preventive action limits published in RIDEM Regulation 12-100-006, Rules and Regulations for Groundwater Quality, dated August 1996. No exceedances of the Class GA groundwater quality standards and preventive action limits for the three detected metals were found in the total metals (unfiltered) samples or the dissolved (filtered) metals sample from MW-605.

### TABLE 2-2 GROUNDWATER QUALITY STANDARDS COMPARISON TANK 38 ROUND 1 CORRECTIVE ACTION GROUNDWATER MONITORING (JULY 1998) TANK FARM 4 NETC-NEWPORT, RHODE ISLAND

Monitoring Well (Tank)	Substance (positive detections only)	Unfiltered Sample Results (total metals)	Filtered Sample Results (dissolved metals)	Class GA Groundwater Quality Standard	Class GA Preventive Action Limit
MW-605 (Tank 38)	Barium	24.5	24.2	2,000	1,000
	Cadmium	2.3	2.2	5	2.5
	Silver	6.4	5.5	NA	NA

units: μg/L

NA: not applicable

APPENDIX A

MW-605 BORING LOG

BORING LOG FOR. CTO 143 - Tank Farm 4 - Tank 38 Corrective Action Groundwater Monitoring

LOGGED BY: Tracy Dorgan TRANSCRIBED BY: LAC

DRILLED BY (Company/Driller): Maher Env./Denis Duchnowski

GRD. SURFACE ELEVATION: 64.39 **ELEVATION FROM:** 

BORING NO.: SB-605 START DATE: 6-12-98 COMPLETION DATE: 6-15-98

MON. WELL NO.: MW-605

	T		11014. 64.39		ELEVA	TION FROM:		MON	. WELL NO.: <u>MW-60</u>	<u>5</u>
DEPTH	BLOWS	SAMP	SAMPLING	OF DEL	CE CHANGE	A WAR CHANGE		CHE(	CKED BY : Mike Heal	ey miss
(FEET)	PER 6"	REC / SAMP LENG.	TIME & SAMPLE NO (QA/QC STATUS	MAT'L CHG / WELL	DENSITY CONSIS	CLR	MATERIAL CLASSIFICATION	USCS or ROC K BRKN	REMARKS (moisture condition, odors; geological classification; rock	FIELI SCREEN DAT/ METHO { FID, Jar
2							No samples from 0-4'			
				1				-		
4	23 74	4.0	S-1=4-6' @ 1125	-	v dense	olive	Silb gravelly CAMP 14			<del></del>
	33 35	13 20			<del> </del>	gray dark	Silty, gravelly SAND. Mostly F-C well graded sand, some fine angular gravel, trace - few silt.	sm	Dry, no odors or staining noted  No structure noted	0 0 ppm
						gray	No samples taken	+	140 Structure noted	ļ
									Noted small clay & silt balls in wash water from	<del> </del>
, -	18	12	S-2=9-11' @ 1205	1	v dense	layered it. gray,	S-2A=1'-silty, poorly graded fine SAND	sp	6-8'.	
	28 36	20			dense	dk. gray, orange dk gray	S-2B=similar to S-1 above (0 2')	sm	Saturated (from wash?) oxidation staining in S-2A . Fine	0 0 ppm
				-		31	No samples taken	gm	~1/8" thick	
			, ,							
	18		S-3=14-16' @	poss top of	dense	dk olive	Silty, SAND. Mostly F-C sand, some	sm	Saturated, slight	00-
	85 52	20		bedrock at ~16'	v dense	gray	SILT, trace clay, trace fine angular gravel. 1 piece soft altered schist ~1/2" diam	Sc		0.0 ppm

	TYPE	OF	DRILL	ING	RIG	Mobile	B53-AT	v

METHOD OF ADVANCING BORING: Drive & wash - 4 in I.D. casing

METHOD OF SOIL SAMPLING 2 in split-barrel sampler driven with a down-hole hammer (140 lb)

METHOD OF ROCK CORING: N/A

GROUNDWATER LEVELS: W.L. meas @ 0820 on 6-15-98 prior to re-advancing casing=6 68' bgs casing @ 14', sampled from 14-16' on 6-12-98

OTHER OBSERVATIONS

Brown & Root Environmental

BORING NO .: SB-605

PAGE: 1 of 2

BORING LOG FOR CTO 143 - Tank Farm 4 - Tank 38 Corrective Action Groundwater Monitoring PROJECT NO.0288 LOGGED BY: Tracy Dorgan TRANSCRIBED BY: LAC DRILLED BY (Company/Driller): Maher Env./Denis Duchnowski

BORING NO.: SB-605

**START DATE: 6-12-98** 

**COMPLETION DATE: 6-15-98** 

MON. WELL NO.: MW-605

			Dillier). Mariei En	v./Denis r	Ju						N. WELL NO.: <u>MW-60</u>	<u> </u>
GRD. S	URFACE	ELEVA	TION: 64.39			ELEVA	rio	N FF	ROM:	CHI	ECKED BY : Mike Heal	ley min
	i			2000年	113	心性地域	猴		REPRESENTATION OF THE PROPERTY	<b>建筑</b>		
DEPTH (FEET)	BLOWS PER	SAMP REC	SAMPLING TIME	DEPTH MAT'L	[	SOIL ENSITY/			MATERIAL	USCS	REMARKS (moisture condition,	FIELD SCREENIN
_	6"	SAMP	& SAMPLE NO	CHG / WELL	١	CONSIS or ROCK		CLR	CLASSIFICATION	ROCK BRKN	odors, geological classification; rock	DATA METHOD
16		LENG	(QA/QC STATUS)	PROF'L	+	HARD	<del> </del>			<b></b>	weathering, etc )	[FID HS]
	33 40	08	S-4 @ 16-18' @ 0935	Poss	S	aprolite	ak	gray	Saprolitic phyllite- very soft, slightly fissile	ł	Soft, altered Easily	1
	42		0933	top of bedrock	⊢	-	$\vdash$			<del> </del>	molded in fingers	0 ppm
18	45	20		@~16'	L	ļ	1	,		9	Note: dk gray phyllite fragments & wash water	
									End of boring at 18'		change @ ~15 8-16'.	
					_				Casing to 16'			
									Poss top of bedrock at ~16'			
								1				
			·					-				
			,									•
												ļ <del></del>
			į.									
			•									
				}								
	<b>l</b>										<u> </u>	

TYPE OF DRILLING RIG	Refer to P 1 of 2 for details	Brown & Root Environmental
METHOD OF ADVANCING BORING. METHOD OF SOI L SAMPLING METHOD OF ROCK CORING		
GROUNDWATER LEVELS OTHER OBSERVATIONS		BORING NO.: SB-605 PAGE: 2 of 2

APPENDIX B

MW-605 WELL CONSTRUCTION LOG

OVERBURDEN MONITORING WELL CONSTRUCTION LOG TETRA TECH NUS, INC. CTO 143 -Tank 38 - Corrective Action Groundwater **PROJECT PROJECT** 0288 NETC - Newport, RI PROJECT WELL NO: MW-605 CLIENT. U.S. Navy SB-605 **BORING** CONTRACTOR Maher Environmental BORING ORILLER: Denis Duchnowski LOGGED Tracy Dorgan Downgradient from Tank 38. DATE. 6-15-98 Downhill side - West Mike Healey CHECKED mill 9-29-30 DATE. PAGE. 0F ELEVATION TOP OF 66.45 CASING LENGTH OF PROTECTIVE CASING GROUND SURFACE 2.07 ELEVATION TOP 65.80 LENGTH OF RISER PIPE ABOVE 1.43 SURFACE **GROUND** 64.39 ELEVATIO TYPE OF SURFACE concrete 4.5-5.0 in. DIA. SURFACE SEAL BGS DEPTH TO BOTTOM OF SURFACE SEAL 2.5 4.0 in. SAND DRAIN ID. OF PROTECTIVE CASING TYPE OF PROTECTIVE steel DEPTH BOTTOM OF PROTECTIVE CASING 3.0 3.5 DEPTH BOTTOM OF DRAIN LAYER RISER PIPE (In ) 10.. \_2\_ 2 1/4 0 D. schedule 40 PVC TYPE OF RISER PIPE TYPE OF BACKFILL AROUND RISER PIPE N/A 3.5 DEPTH TOP OF SEAL (FL) - 2 stainless steel centralizers at bentonite chip top & bottom of screen. TYPE OF SEAL DEPTH BOTTOM OF SEAL 4.5 - End cap is a 0.18' long threaded 6.0' sump. DEPTH TOP OF PERVIOUS SECTION (FL) 4.5 DIAMETER OF BOREHOLE (In ) schedule 40 PVC TYPE OF PERVIOUS SECTION TYPE OF OPENINGS 010" factory slotted PERVIOUS SECTION 10 00. 21/4 TYPE OF FILTER PACK AROUND No. 0 silica sand PERVIOUS SECTION 16.01 DEPTH BOTTOM OF PERVIOUS SECTION <del>16' casing</del> 18' DEPTH BOTTOM OF FILTER PACK WA Janz TYPE OF BACKFILL BELOW FILTER 18.0 END OF BORING(FL) GENERAL NOT 1 Entry of 0 00 for Ground Elevation, Elev Top of Riser Pipe & Elev Top of Indicates that Surveyed Ground Elevation Not

APPENDIX C

MW-605 AND MW-418 SURVEY DATA

#### LOUIS FEDERICI and ASSOCIATES

365 Smith Street, Providence, RI 02908 Tele: 401-331-1570 Fax: 401-331-1593 land surveyors biologists planners

Tabulation of field located wells for Tetra Tech NUS Inc - at Tank Farm 4, Newport, RI

LFA PROJECT NUMBER = 941005

Date Surveyed: 6/10/98;

The values below are based on the following datums: Horizontal = NAD 1983; Vertical = Local Mean Low Water

LFA PT.	T. T. NUS	NORTHING	EASTING	EXISTING	TOP OF	TOP OF
NO.	I.D.			GRADE	CASE	PVC
430	MW-422	175114.4408	385688.0337	83.20	85.39	85.17
431	MW-408	175158.0771	385829.7521	84.30	87.06	86.90
432	MW-805	175063.4749	385749.3733	81.37	83.21	82.87
433	MW-409	175020.5954	385747.8505	78.18	80.77	80.49
434	MW-425	174997.3438	385729.7083	77.10	79.07	78.95
435	MW-809	174994.9590	385772.2108	76.19	78.54	78.18
436	MW-424	175019.7637	385801.6906	76.71	79.12	78.97
437	MW-421	174996.6163	385861.5568	72.91	75.20	75.01
438	MW-801	175554.0228	385417.9591	89.84	91.70	91.25
439	MW-806	175564.2284	385388.6168	87.79	89.70	89.45
440	MW-808	175485.7012	385709.9235	108.84	110.72	110.46
441	MW-807	175475.3647	385738.0198	109.73	111.91	111.62
442	SB-804	175465.9794	385756.6615	110.62		
443	MW-802	175464.8346	385766.0839	111.01	113.03	112.80
444	SB-803	175542.8778	385795.4660	110.86		
445	MW-330	175546.5288	385798.7502	110.69	112.87	112.79
446	MW-331	175469.8916	385885.5592	113.22	114.79	114.65
447	MW-332	175422.5083	385811.2934	112.70	114.00	113.84
448	MW5D	175361.5299	385929.7505	115.26	118.43	118.13
449	MW-5S	175356.7993	385931.6799	115.41	118.60	118.37
450	MW-605	175872.8654	385124.3352	64.39	66.45	65.80
<b>4</b> 51	MW-418	175832.9219	385262.7563	69.90	72.37	72.23
452	MW-3S	175447 7299	385208.7553	72.53	75.66	75.36
453	MW-3D	175448.7882	385220.7880	73.54	76.73	76.45
454	MW-1D	175815.4290	384802.6251	51.17	53.92	53.55
455	MW-1S	175811.6709	384797.3819	50.88	53.69	53.69
456	MW-10	176361.0099	384315.0531	30.83	32.45	32.20
457	MW-4	175191.5840	383444.1375	34.11	36.99	36.73
77	BM #7	178487.4068	386160.1205	12.85		

RI Rge/Number 1646

#### APPENDIX D

MW-605 ROUND 1 SAMPLE LOG SHEET

TETRA TECH NUS, INC.		SAMPLE I	OG SHEET - LIQUID PH	IASE
Site Name: TANK FARM 4-695-01	0143-SSI	Tetra 1	ech, NUS Job No./PMS /), ormation:	286-055Z (if applicable)
Sampler(s):	Tracy Darch		AMPLE: (Check all that appundwater face Water idential Supply on posite	Trip Blank*  Rinsate Blank*  Field Duplicate Collected Other (Specify):  *Include sample source & lot No.
WELL PURGE DATA:  Well Purge Start  Well Purge Start		Micro Tip/	OVA Monitor Reading:	mqq
Inside Diameter Inches Purge Stop T  Z  Water Level 9.61 teet Total Gallons Purged  Well Volume 1.3 gal. Purge Method  Color: Brown Turbidity: CLKO	No 1025 No 1035 1035 1 2 2 DEP. BAHLUR GL CLDY/OPAQ	275 13 925 12 		Spec. Cond. SAUN. DO ,421 01 2.27 ,427 0.01 3.11
	TELOTNO.	RAFFIC REPORT NO.		COMMENTS
JOCIS-6260	OR	GANIC INORGAN	C INIT. BAILER FR	om AIR/HO INTERPRET
SUOCIS			No SHEEN POTE	D.
TOTAL NUTHLS (PLRA)				
DIS. MUTALS (")			WAL BAILED DRY	P IN 10 MIN. TOTAL PLECE=
1144 (10.1			26AL. WATT FOR	R RETORY.
To NUS form HA				
T1, NUS form #4			have 6.78	hr 75% Fee

HOE BY

### APPENDIX E LABORATORY ANALYTICAL DATA

Sample Number	38-MW-605-01		38-MW-605-01F	
Sample Location	38-MW-605		38-MW-605	
Date Sampled	7/9/98		7/9/98	
Description	Unfiltered		Filtered	
Matrix	Aqueous		Aqueous	
Volatile Organic Compounds (ug/L)				
1,1,1,2-Tetrachloroethane	5	U		NA
1,1,1-Trichloroethane	5	U		NA
1,1,2,2-Tetrachloroethane	5	U		NA
1,1,2-Trichloroethane	5	U		NA
1,1-Dichloroethane	5	U		NA
1,1-Dichloroethene	5	U		NA
1,1-Dichloropropene	5	U		NA
1,2,3-Trichlorobenzene	5	U		NA
1,2,3-Trichloropropane	5	-		NA
1,2,4-Trichlorobenzene	5	U		NA
1,2,4-Trimethylbenzene	5			NA
1,2-Dibromo-3-chloropropane		U		NA
1,2-Dibromoethane	5	_		NA
1,2-Dichlorobenzene	· · · · · · · · · · · · · · · · · · ·	U		NA
1,2-Dichloroethane		U		NA
1,2-Dichloropropane		U		NA
1,3,5-Trimethylbenzene	<del></del>	U		NA
1,3-Dichlorobenzene	5	_		NA
1,3-Dichloropropane	5	U		NA
1,4-Dichlorobenzene		U		NA
2,2-Dichloropropane 2-Butanone	5	<u> </u>		NA NA
2-Chloroethylvinyl ether		U		NA
2-Chlorotoluene		U		NA
2-Hexanone		U		NA
4-Chlorotoluene	5	U		NA
4-Methyl-2-Pentanone	5	_		NA
Acetone	6	<del>                                     </del>		NA
Benzene	5	U		NA
Bromobenzene	5	U		NA
Bromochloromethane	5	_		NA
Bromodichloromethane	5	U		NA
Bromoform		U		NA
Bromomethane	+	U		NA
Carbon Disulfide	5	U		NA
Carbon Tetrachloride	5	U		NA
Chlorobenzene	5	U		NA
Chloroethane	5	U		NA
Chloroform	5	U		NA
Chloromethane	5	U		NA
cis-1,2-Dichloroethene	5	υ		NA
cis-1,3-Dichloropropene	5	U		NA
Dibromochloromethane	5	U		NA
Dibromomethane	5	υ		NA
Dichlorodifluoromethane	5	U		NA
Ethylbenzene	5	U		NA
Hexachlorobutadiene	5	U		NΑ
lodomethane	5			NA
Isopropylbenzene	5			NA
Methyl tert-Butyl Ether	5	U		NA
Methylene Chloride	5			NA
n-Butylbenzene	5	U		NA
n-Propylbenzene	5	U		NA
Naphthalene	5			NA
p-Isopropyltoluene	5	U		NA
sec-Butylbenzene	5			NA
Styrene	5	U		NA
		_		

ANALYTICAL RESULTS TK 38 RD 1 CA GW MONITORING TF 4, NETC - NEWPORT, RI CTO 143

Sample Number	38-MW-605-01		38-MW-605-01F	
Sample Location	38-MW-605		38-MW-605	1
Date Sampled	7/9/98		7/9/98	
Description	Unfiltered		Filtered	
Matrix	Aqueous		Aqueous	
Volatile Organic Compounds (uga	/L) cont.	Ī		
tert-Butylbenzene		U		NA
Tetrachloroethene	5	U		NA
Toluene	5	U		NA
Total Xylenes	5	U		NA
trans-1,2-Dichloroethene	5	U		NA
trans-1,3-Dichloropropene	5	U		NA
Trichloroethene	5	U		NA
Trichlorofluoromethane	5	U		NA
Vinyl Acetate	5	U		NA
Vinyl Chloride	5	U		NA

Sample Number	29 MM/ COE O4		20 MM/ COE 045	
Sample Number Sample Location	38-MW-605-01 38-MW-605	_	38-MW-605-01F 38-MW-605	
Date Sampled	7/9/98	-	7/9/98	<u> </u>
Description	Unfiltered		Filtered	<u> </u>
Matrix	Aqueous	-	Aqueous	
Semivolatile Organic Compounds (ug/L)		<u> </u>		<u></u>
1,2,4-Trichlorobenzene	10	υ		NA
1,2-Dichlorobenzene	10			NA
1,3-Dichlorobenzene	10	$\vdash$		NA
1,4-Dichlorobenzene	10			NA
2,2'-oxybis(1-Chloropropane)	10	U		NA
2,4,5-Trichlorophenol	25			NA
2,4,6-Trichlorophenol	10			NA
2,4-Dichlorophenol	10	$\vdash$		NA
2,4-Dimethylphenol	10	-		NA
2,4-Dinitrophenol	25	-	-	NA
2,4-Dinitrotoluene	10	-		NA
2,6-Dinitrotoluene	10	-		NA
2-Chloronaphthalene	10	_		NA
2-Chlorophenol	10			NA
2-Methylnaphthalene	10			NA
2-Methylphenol	10			NA
2-Nitroaniline	25			NA
2-Nitrophenol	10	_		NA
3,3'-Dichlorobenzidine	10			NA
3-Nitroaniline	25	-		NA
4,6-Dinitro-2-methylphenol	25			NA
4-Bromophenyl-phenylether	10			NA
4-Chloro-3-methylphenol	10			NA
4-Chloroaniline	10			NA
4-Chlorophenyl-phenylether	10	U		NA
4-Methylphenol	10	U		NA
4-Nitroaniline	25	U		NA
4-Nitrophenol	25	υ		NA
Acenaphthene	10	υ		NA
Acenaphthylene	10	U		NA
Anthracene	10	Ū		NA
Benzo(a)anthracene	10	U		NA
Benzo(a)pyrene	10	υ		NA
Benzo(b)fluoranthene	10	U		NA
Benzo(g,h,ı)Perylene	10			NA
Benzo(k)fluoranthene	10	U		NA
Bis(2-Chloroethoxy)Methane	10	υ		NA
Bis(2-Chloroethyl)ether	10	U		NA
bis(2-Ethylhexyl)phthalate	10	U		NA
Butylbenzylphthalate	10	υ		NΑ
Carbazole	10	U		NA
Chrysene	10	U		NA
Dı-n-Butylphthalate	10	υ		NΑ
Dı-n-octylphthalate	10	U		NA
Dibenzo(a,h)Anthracene	10	υ		NA
Dibenzofuran	10	U	<del></del> i	NA
Diethylphthalate	10			NA
Dimethylphthalate	10	<del>i</del>		NA
Fluoranthene	10	<del></del>		NA

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ANALYTICAL RESULTS TK 38 RD 1 CA GW MONITORING TF 4, NETC - NEWPORT, RI CTO 143

Sample Number	38-MW-605-01		38-MW-605-01F	_
Sample Location	38-MW-605		38-MW-605	
Date Sampled	7/9/98		7/9/98	
Description	Unfiltered		Filtered	
Matrix	Aqueous		Aqueous	
Semivolatile Organic Compounds	(ug/L) cont.			
Hexachlorobenzene	10	υ		NA
Hexachlorobutadiene	10	υ		NA
Hexachlorocyclopentadiene	10	U		NA
Hexachloroethane	10	υ		NA
Indeno(1,2,3-cd)pyrene	10	U		NA
Isophorone	10	u		NA
N-Nitroso-di-n-propylamine	10	U		NA
N-Nitroso-diphenylamine	10	υ		NA
Naphthalene	10	U		NA
Nitrobenzene	10	υ		NA
Pentachlorophenol	25	υ		NA
Phenanthrene	10	U		NA
Phenol	10	U		NA
Pyrene	10	U		NA

ANALYTICAL RESULTS TK 38 RD 1 CA GW MONITORING TF 4, NETC - NEWPORT, RI CTO 143

Sample Number	38-MW-605-01		38-MW-605-01F	
Sample Location	38-MW-605		38-MW-605	
Date Sampled	7/9/98		7/9/98	
Description	Unfiltered		Filtered	
Matrix	Aqueous		Aqueous	
Metals (ug/L)				
Arsenic	2	U	2	υ
Barium	24 5	В	24 2	В
Cadmium	23	В	22	В
Chromium	06	U	06	U
Lead	2 1	U*	2 1	U*
Mercury	0 09	U	0 09	U
Selenium	5	U	5	U
Silver	64	В	55	В
Total Petroleum Hydrod	arbons (TPH) (m	g/L)		
Total Petroleum Hydroca	11	U		NA



#### INTERNAL CORRESPONDENCE

C-NAVY-8-98-1226W

Date:

September 24, 1998

cc: File N0288A-4.10

To:

James Forrelli

From:

Linda Terzis

Subject:

Data Review, Project No. 0288, SDG No. E1091

Mitkem Corporation

NETC Tank Farm 4 Site, Newport, RI

VOC/SVOC/Total Metals/TPH:

11/Groundwaters/ 42-MW-801-01, 45-MW-808-01,

45-MW-807-01, 45-MW-802-01, 45-MW-330-02, 38-MW-605-01, 48-MW-809-01, 48-MW-805-01, 48-MW-425-02, 48-MW-424-02,

TF4-MW-DUP-01

(Field Duplicate Pair 48-MW-424-02/

TF4-MW-DUP-01)

1/Aqueous Rinsate Blank/ TF4-MW-RB-01

2/Aqueous Trip Blanks/

TF4-MW-TB-01, TF4-MW-TB-02

(VOCs only)

Dissolved Metals:

11/Groundwaters/ 42-MW-801-01F, 45-MW-808-01F,

45-MW-807-01F, 45-MW-802-01F, 45-MW-330-02F, 38-MW-605-01F, 48-MW-809-01F, 48-MW-425-02F, 48-MW-424-02F,

TF4-MW-DUP-01F

(Field Duplicate Pair 48-MW-424-02F/

TF4-MW-DUP-01F)

1/Aqueous Rinsate Blank/ TF4-MW-RB-01F

Gasoline Range Organics (GRO):

3/Groundwaters/ 48-MW-425-02, 48-MW-424-02,

TF4-MW-DUP-01

(Field Duplicate Pair 48-MW-424-02/

TF4-MW-DUP-01)

Memo to James Forrelli September 24, 1998 Page Two

1/Aqueous Rinsate Blank/ TF4-MW-RB-02

1/Aqueous Trip Blank/ TF4-MW-TB-02

A cursory data review was performed on the volatile, semivolatile, total metals, dissolved metals, gasoline range organics (GRO), and total petroleum hydrocarbons (TPH) data associated with groundwater samples collected at the NETC Tank Farm 4 site, on July 8 and 9, 1998. The volatile organic compounds were analyzed by USEPA SW-846 Method 8260A. The semivolatile organic compounds were analyzed by USEPA SW-846 Method 8270B. The total and dissolved metals were analyzed by USEPA SW-846 Methods 3005A/6010A/7471A. GRO results were reported from the total ion chromatographs of the volatile analysis, and total petroleum hydrocarbons were analyzed by USEPA Method 418.1.

The data package was checked for completeness. The laboratory was contacted on August 10, 1998 concerning missing GRO results, and for verification of TPH sample extraction dates. The laboratory responded on August 11, 1998 and verified that the TPH samples were extracted and analyzed on the same day as noted in the data package. Please note that the TPH sample analysis dates are incorrectly listed as 99/01/11 and 99/01/13 on the sample plots. The raw data indicate that the samples were analyzed on 7/13/98 and 7/15/98. GRO analysis was not performed on the samples due to a sample log-in error. Therefore, the laboratory reported estimated GRO results from the total ion chromatographs of the volatile analyses, which were performed within holding time. The results were received at TtNUS on August 18, 1998. The laboratory was contacted on August 11, 1998 concerning missing electronic deliverables for some samples. The laboratory was contacted again on August 21, 1998 concerning electronic deliverables for the GRO data, as well as the previously requested missing electronic deliverables. The missing information was received at TtNUS on August 21, 1998. The laboratory was contacted on September 1, 1998 concerning the TAL and dissolved metals results. Some sample results suggest that the samples may have been reversed (higher contaminant results in the filtered sample than in the unfiltered sample), or have been affected by laboratory or field contamination. TtNUS requested the reananlysis of selected samples. In addition, the laboratory was requested to investigate the possibility of laboratory contamination with lead. The laboratory responded on September 8, 1998. The laboratory verified that sample containers were not reversed during analysis, however, the lead results for reanalysis of selected samples were non-detected, including the field blanks. Therefore, the laboratory was requested to redigest and reanalyze (except for mercury) all of the groundwater samples. The data was received on September 21, 1998. Samples 48-MW-424-02F and 48-MW-805-01F could not be redigested and reanalyzed due to lack of sample volume, however, lead was not detected in the original analysis of these samples and they are not effected by the lead contamination. All other lead results are reported from the reanalyses. Most sample results in the reanalyses were higher than in the original analyses, due

Memo to James Forrelli September 24, 1998 Page Three

possibly to the difference in homogeneity of the sample aliquot taken for reanalysis. Therefore, professional judgement was used to report all other analyte results from the original analyses.

The data package was checked for blank contamination and laboratory and field precision. Diethylphthalate was detected in the semivolatile rinsate blank. Acetone, methylene chloride, and carbon disulfide were detected in the volatile field blanks, and acetone, methylene chloride, and naphthalene were detected in the volatile laboratory blanks. The acetone and methylene chloride contamination was present at similar concentrations in the field and laboratory blanks. Barium, cadmium, silver, and mercury were present in both the laboratory and field blanks. Arsenic and chromium were present in the rinsate blank. Positive results for these compounds may be biased high or false positive. The data user is cautioned in using positive results near the quantitation limit for these compounds as they may be solely attributable to blank contamination. Lead results for all samples except 48-MW-424-02F and 48-MW-805-01F are reported from reanalyses since the original analyses were affected by a laboratory contamination problem with lead. The relative percent difference of the TPH field duplicate results was greater than 50%. The data user is cautioned in using positive results for TPH in the samples due to poor field duplicate precision. The GRO results should be considered estimated due to the analytical method employed.

The review included a check for major non-compliances in the quality control summary forms and data summary forms. The sample chromatographs and plots were reviewed for agreement with the positive hits from the sample data. The volatile compound 2-chloroethyl vinyl ether was recovered at 0% in both the matrix spike and matrix spike duplicate analyses. Styrene was recovered slightly below the QC limits. These compounds were recovered at acceptable levels in the laboratory control spike analyses. Styrene results may be biased low, and non-detected 2-chloroethyl vinyl ether results should not be used due to the possibility of false negative data.

The summary table results should be used with caution since the sample data have not been validated. Positive results for diethylphthalate, acetone, methylene chloride, carbon disulfide, naphthalene, barium, cadmium, silver, mercury, arsenic, and chromium may be biased high or false positive attributable to blank contamination. TPH results should be used with caution due to poor duplicate field precision. Styrene results may be biased low due to poor spike recoveries. The volatile compound 2-chloroethyl vinyl ether results should not be used due to the potential for false negative data. The GRO results should be considered estimated due to the analytical method employed.

#### **UNVALIDATED DATA**

Site: Tank Farm 4 Case: 0288; SDG: E1091

Station Location	45-MW-330-02	48-MW-424-02		T	48-MW-425-02		38-MW-605-01		42-MW-801-01		W-802-01	
Station Location	45-MW-330-02	48-MW-424-02		1	48-MW-425-02		38-MW-605-01		42-MW-801-01	45-N	IW-802-01	
Date Sampled	7/8/98	7/	9/98	1	7/9/98		7/9/98		7/8/98		7/8/98	
Date Extracted	<del>                                     </del>			7	-							
Date Analyzed	7/15/98	7/2	1/98	1	7/16/98		7/15/98		7/15/98		7/15/98	
Dilution Factor	1		1	7	1		1		1		1	
Percent Solids	0.0		00	7	0.0		0.0		0.0		0.0	
QC Identifier	None	Field Dup. 48-MW-424-	02		None		None	_	None	None		Ш
Dichlorodifluoromethane	5 U		5 U			U	5		5 L		5	
Chloromethane	5 U		5 U			U	5		5 L			U
Vinyl Chloride	5 U	J	5 U	J		υ	5		5 L		5	_
Bromomethane	5 U	j	5 U	J	5	J	5		5 L		5	1
Chloroethane	5 U		5 U	ı	7.	U	5		5 L		5	
Trichlorofluoromethane	5 U		5 U			U	5		5 l		5	
1,1-Dichloroethene	5 U	J	5 U	Ī		U	5	U	5 (	<u> </u>		1 1
Acetone	4 J		8 B				6		5		6	
lodomethane	5 U	J	5 U	1		ادا	5		5 (		5	
Carbon Disulfide	5 U	į	5 U	J	5			U	5 l		-	
Methylene Chloride	5 L	J	5 L	Ī	5	Ū		U	5 l	J		
Methyl tert-Butyl Ether	2 J		1 J	ī	2	J	5	U	1 .		2	
trans-1,2-Dichloroethene	5 L	J	5 L	J	_			U	5 (		5	
1.1-Dichloroethane	5 L	J	5 L	-		1	1 1	Ü	5 (			
Vinyl Acetate	5 L	J	5 L			U	5		5 (		5	
2-Butanone	5 L	j	5 L		5	I		U	5 (		5	
cis-1,2-Dichloroethene	5 L	·	5 L		5		-	U	5 (			
2,2-Dichloropropane	5 L	j	5 L	J		U		U	5 (			
Bromochloromethane	5 L		5 L		5	I	-	U	5 (		5	
Chloroform	5 (		5 L	_	5			U	5 (			
1,1,1-Trichloroethane	5 (		5 L			U	1	U	5 (		5	
1,1-Dichloropropene	5 (		5 L		5			υ	5 (		-	
Carbon Tetrachloride	5 (		5 (		5			U	5 (		_	
1,2-Dichloroethane	5 L		5 L		5			U	5 (			U
Benzene	5 (		5 L		5	1	1	U	5 (			U
Trichloroethene	5 (		5 L	J	5			υ	5 (			Ū
1,2-Dichloropropane	5 (		5 L	_	5		1	U	5 (	1		U
Dibromomethane	5 (		5 L		5			U	5 (			U
Bromodichloromethane	5 (		5 L	_	5		ľ	U	5 (	. 1		U
2-Chloroethylvinyl ether	5 (		5 L	_	5			Ū	5 (			U
cis-1,3-Dichloropropene	5 L		5 L			U		U	5 (			U
4-Methyl-2-Pentanone	5 (		5 L			U	N. Control of the Con	U	5 (			U
Toluene	5 (		5 L			U	I .	U	5 (			U
trans-1,3-Dichloropropene	5 L		5 (			U		U	5 (			U
1,1,2-Trichloroethane	5 L	J	5 (	U	5	U	5	U	5 (	1	5	U

#### UNVALIDATED DATA

Site: Tank Farm 4

Case: 0288; SDG: E	45-MW-330-02		48-MW-424-02		48-MW-425-02		38-MW-605-01	П	42-MW-801-01		45-MW-802-01	I
Station Location	45-MW-330-02	$\vdash$	48-MW-424-02		48-MW-425-02	_	38-MW-605-01	7	42-MW-801-01		45-MW-802-01	ſ
Date Sampled	7/8/98		7/9/98	$\vdash$	7/9/98		7/9/98	_	7/8/98		7/8/98	J
	170/90	H	7,0,00	<del> </del>								T
Date Extracted	7/15/98	Н	7/21/98	-	7/16/98	_	7/15/98	_	7/15/98		7/15/98	3
Date Analyzed	1/13/30	├	1	$\vdash$	1		1		1		1	i
Oilution Factor	00	H	00		00		00		0.0		00	,
Percent Solids		-	Field Dup. 48-MW-424-02	$\vdash$	None		None	-	None	_	None	1
QC Identifier	None	U		υ		Ü	5	U	5	U	5	آز
,3-Dichloropropane			5		1	U	5			Ū	5	5
Tetrachloroethene		U	5	J		U	5			Ū	5	5
2-Hexanone		U	5			U	5			Ū	5	
Dibromochloromethane		Ü	5	1	_	Ü	5			U	5	
1,2-Dibromoethane		U	1	1			5			Ü	5	
Chlorobenzene		U	5			U U	5			Ü	5	_
1,1,1,2-Tetrachloroethane		U	5		<u> </u>	J	5		1	U	5	_
Ethylbenzene		U	5				5		5		5	_
Total Xylenes		U	I .	U		I	5		5	1	5	
Styrene		U		U			5			Ü	5	_
Bromoform		U	5	+-		·		_	_	U	5	_
sopropylbenzene		U	1	1-	3		5 5	_		U	5	
1,1,2,2-Tetrachloroethane	1	U		Ū			1 1		5		5	
1,2,3-Trichloropropane		U	1	U	1	U	5		5		5	
Bromobenzene .		U		U			5				<del>_</del>	_
n-Propylbenzene	5	U		U		J	5		5		1	_
2-Chlorotoluene	5	U		U			5			U	3	3
1,3,5-Trimethylbenzene		U		U			5			U	5	
4-Chlorotoluene	5	U		U		1	5		5		5	
tert-Butylbenzene	5	įυ		U			5	Ξ.				
1,2,4-Trimethylbenzene	5	Ū		U		4	5		5		5	
sec-Butylbenzene	5	υ		J	1		5			U		
p-Isopropyltoluene	5	Ū	1	Ū			5		l	U		
1,3-Dichlorobenzene	5	Ū		Ū		U	5	_	5	ᅸ		
1,4-Dichlorobenzene	-	įυ		įυ	5	U	5	_				
n-Butylbenzene		δŪ		Ū			5			1		
1.2-Dichlorobenzene		5 U		ū		U	5		1	U		
1,2-Dibromo-3-chloropropane		υ		Ū	5	U		Ū		U		
1,2,4-Trichlorobenzene		5 U		5 u	5	U		U		U		
Hexachlorobutadiene		5 U		s u		U	5	U		U		_
		5 U		B			5	U	5	U		
Naphthalene 1,2,3-Trichlorobenzene		5 U				ΙŪ	5	Ū	5	Ū		•

#### **UNVALIDATED DATA**

Aqueous Volatile Organic Analysis (ug/l)

Site: Tank Farm 4

Case: 0288; SDG: E	48-MW-805-01	I	45-MW-807-01	4	15-MW-808-01	T	48-MW-809-01		TF4-MW-DUP-01	٦	TF4-MW-RB-01	Ţ	TF4-MW-RB-02	
Station Location	48-MW-805-01	$\vdash$	45-MW-807-01		I5-MW-808-01		48-MW-809-01		TF4-MW-DUP-01	1	TF4-MW-RB-01	1	TF4-MW-RB-02	
Date Sampled	7/9/98	<del> </del>	7/8/98	+	7/8/98	7	7/9/98		7/9/98		7/8/98	T	7/9/98	
Date Extracted				1		1								
Date Analyzed	7/16/98	_	7/15/98	1	7/15/98	7	7/16/98		7/21/98		7/15/98	1	7/17/98	
Dilution Factor	1	$\vdash$	1	+	1	7	1		1		1		1	
Percent Solids	00	$t^-$	0.0	T	0.0	٦	0.0		0.0		0.0		0 0	
QC Identifier	None		None	N	None		None		Field Dup. 48-MW-424-02		Rinsate Blank	_[	Rinsate Blank	
Dichlorodifluoromethane	5	U	5 Ü	ī	5 U	J	5		5		5 L		5	
Chloromethane	5	Ū	5 U	1	5 U	ī	5		5 (		5 L		5	
Vinyl Chloride	5	Ū	5 Ü	iŤ	5 U	J	5		5		5 (		5	
Bromomethane	5	U	5 U		5 U	ij	5	U	5 (		5 L		5	
Chloroethane		U	5 U	7	5 Ü	ī	5		5 (		5 L		5	
Trichlorofluoromethane		U	5 U	ī	5 U	ī	5		5		5 L		5	
1,1-Dichloroethene	5	Ū	5 U	ij	5 U	J	5		5 (		5 L	U	5	
Acetone	4	JB	4 J		5	٦		JB	8		5	$\perp$	5	
lodomethane	5	U	5 U	ī	5 U	ī	5		5 (		5 (	U	5	
Carbon Disulfide	5	U	1 J	1	1 J		5		5 (		6		5	
Methylene Chloride	5	U	5 U	ī	5 U	J	5		5 (		2 J			JB
Methyl tert-Butyl Ether	1	J	2 J	1	3 J		2		2.		5 l		5	
trans-1,2-Dichloroethene	5	Ü	5 U	ī	5 U	ī	5		5 (		5 (		5	
1,1-Dichloroethane	5	U	5 U	ī	5 U			U	5		,	U	5	
Vinyl Acetate	5	U	5 U	ij	5 U		5		5 1		5 (		5	
2-Butanone	5	U	5 Ü	,	5 U			Ū	5 (		ii	U		U
cis-1,2-Dichloroethene	5	U	5 U	<u> </u>	5 U		5		5 1		1 71	Ü		Ü
2,2-Dichloropropane	5	Ū	5 U	ij	5 U			Ü	5		-1-	U		U
Bromochloromethane	5	U	5 U	ī	5 0			υ	5		5 (			U
Chloroform	5	U	5 U		5 L			U	5 (		5 (			U
1,1,1-Trichloroethane	5	U	5 U	ij	5 L				5 (		5 (			U
1,1-Dichloropropene	5	U	5 U	j	5 L			υ	5		5 t			U
Carbon Tetrachloride	5	U	5 U		5 L			υ		<u>U</u>	5 (			U
1,2-Dichloroethane	5	U	5 U	<u> </u>	5 L	J		υ		U	5 (			U
Benzene	5	U	5 U	<u>,                                    </u>	5 L			υ	1	U	5 (			U
Trichloroethene	5	Ū	5 U	丌	5 L	j		υ	I	U	5			U
1,2-Dichloropropane	5	U	5 U	ij	5 L			U		Ü	5 (			U
Dibromomethane	5	U	5 U	֓֞֓֞֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓	5 (	J		U	1.	Ū	5 (			U
Bromodichloromethane	5	U	5 U	<u>ַ</u> וֹנ	5 L	Ĵ		U		U		U		U
2-Chloroethylvinyl ether	5	Ū	· 5 U	1	5 (			Ū		U		u		Ū
cis-1,3-Dichloropropene	5	Ū	5 U		5 (	J	1	U		Ū	5			U
4-Methyl-2-Pentanone	5	Ū	5 U		5 (	٠.		U	1	Ū	5 (			U
Toluene	5	U	5 U		5 (			U		U	5 (			U
trans-1,3-Dichloropropene	5	Ū	5 U		5 (			Ū	5		5			U
1,1,2-Trichloroethane	<u> </u>	ū	5 U	1	5 L	Ū	5	U	5	U	5 1	U	5	U

#### UNVALIDATED DATA

Aqueous Volatile Organic Analysis (ug/l)

Site: Tank Farm 4

Case: 0288; SDG: E	1091			_	45 1414 000 04	Τ.	48-MW-809-01	_	TF4-MW-DUP-01	Ŧ	TF4-MW-RB-01	1	F4-MW-RB-02	$\Box$
Station Location	48-MW-805-01		45-MW-807-01		45-MW-808-01		48-MW-809-01	-	TF4-MW-DUP-01	- 1	TF4-MW-RB-01	1	F4-MW-RB-02	
Station Location	48-MW-805-01		45-MW-807-01	-	45-MW-808-01 7/8/98	+	7/9/98		7/9/98	7	7/8/98	_	7/9/98	
Date Sampled	7/9/98		7/8/98	4	7/0/90		713/30	_		7		$\top$		
Date Extracted				-	7/15/98	+	7/16/98		7/21/98	1	7/15/98	7	7/17/98	
Date Analyzed	7/16/98		7/15/98	4	1/15/96	+	1/10/50		1	7	1	7	1	
Dilution Factor	1			4	00	+	00		0.0	7	0.0	7	00	
Percent Solids	00		0.0	-		+	None		Field Dup 48-MW-424-02	7	Rinsate Blank	7	Rinsate Blank	
QC Identifier	None		None	-	None 5 U		5 1	1	5 1	_	5 L	ij	5	U
1,3-Dichloropropane	1	U	5 U	_	5 0		5 (		5 (		5 (		5	U
Tetrachloroethene		U	5 U		5 0		5 (		5 (		5 (	J	5	U
2-Hexanone		U	5 U	- 1	5 0		5 (		5		5 (	U	5	U
Dibromochloromethane		U	5 U	1	5 0		5 (		5 (		5 (	υİ		U
1,2-Dibromoethane		U	5 U		5 1		5		51		5 (		5	U
Chlorobenzene		U	5 U		5 1		5		5 (		5 (	υ	5	Ū
1,1,1,2-Tetrachloroethane		U	5 U		5 (		5		51		5 1	υ	5	Ū
Ethylbenzene		U	5 U		510		5		5		5 (	υİ	5	U
Total Xylenes		U	5 U		5 (		5		51		5 (	υ	5	Ü
Styrene		U	5 0		5 (		5		5		5 (	Ū	5	Ū
Bromoform		U	5 (		51		5		1,		5 (	Ū	5	U
Isopropylbenzene	_	U	5 (		5 (		5		5		5 (	υ	5	U
1,1,2,2-Tetrachloroethane		U	5 (		510	- 1	5		5		51	υ	5	U
1,2,3-Trichloropropane		U	1	J	510		5		5		5	Ü		Ū
Bromobenzene		U		U	51		5		5		5	U		Ū
n-Propylbenzene		U		Ū	5		5		5		5	U	5	υ
2-Chlorotoluene	)	U		Ū	5		5		5			U		δŪ
1,3,5-Trimethylbenzene		U		U	5		5		5			Ū	5	5 U
4-Chlorotoluene	1	U	5 (		1				5		5	Ū	5	5 U
tert-Butylbenzene		U	5 (					Ü	5		5	U	5	5 U
1,2,4-Trimethylbenzene		U	5 (				1	7		J	5	U	5	5 U
sec-Butylbenzene		5 U	5 (				<u></u>	Ü	5	U	5	Ü		5 U
p-Isopropyltoluene		5 U	5 (					บ	5			U		5 U
1,3-Dichlorobenzene		5 U	5			Ü		Ū	5			Ū		5 U
1,4-Dichlorobenzene		5 U	5		1	Ü	1	Ū	5	ΰ	5	Ū		5 U
n-Butylbenzene	l l	5 U	1 . 1.		1			U	5	Ū	5	υ		5 U
1,2-Dichlorobenzene		5 U	5			U		Ü		Ū	5	Ū		5 U
1,2-Dibromo-3-chloropropane		5 U	5		I			Ü		Ū	5	Ū		5 U
1,2,4-Trichlorobenzene		5 U	5					Ü		U		U		5 U
Hexachlorobutadiene		5 U	- 1					Ü		В		U		5 U
Naphthalene	<b>I</b>	5 U	5					Ü		Ū		U		5 U
1,2,3-Trichlorobenzene		5 U	5	U	3	٧	<u> </u>	۳		-				

Site: Tank Farm 4

Case: 0288; SDG: E1091

Case: U200; SDG: E		_		
Station Location	TF4-MW-TB-01		TF4-MW-TB-02	:
Station Location	TF4-MW-TB-01		TF4-MW-TB-02	
Date Sampled	7/8/98		7/9/98	
Date Extracted				
Date Analyzed	7/15/98		7/16/98	
Dilution Factor	1		1	_
Percent Solids	0.0		0 0	
QC Identifier	Trip Blank		Trip Blank	<u> </u>
Dichlorodifluoromethane		U		U
Chloromethane		U	5	U
Vinyl Chloride		υ	5	U
Bromomethane	5	U	5	U
Chloroethane	5	U	5	U
Trichlorofluoromethane	5	υ	5	U
1,1-Dichloroethene	5	U		U
Acetone	7		4	JB
lodomethane		U	5	U
Carbon Disulfide	5	U	5	U
Methylene Chloride	2	J	1	JB
Methyl tert-Butyl Ether	5	U	5	U
trans-1,2-Dichloroethene	5	U	5	U
1,1-Dichloroethane		U	5	U
Vinyl Acetate	5	U	5	U
2-Butanone		U	5	U
cis-1,2-Dichloroethene	5	U	5	U
2,2-Dichloropropane		U	5	U
Bromochloromethane	5	Ü	5	
Chloroform	5	1	5	<u>U</u>
1,1,1-Trichloroethane	5		5	U
1,1-Dichloropropene	5	U	5	
Carbon Tetrachloride	5	U	5	
1,2-Dichloroethane	5	U	5	
Benzene	5	U	5	
Trichloroethene	5	U	5	U
1,2-Dichloropropane	5	U	5	
Dibromomethane	5	U	5	
Bromodichloromethane	5	U	5	
2-Chloroethylvinyl ether	5	U	5	
cis-1,3-Dichloropropene	5	U	5	
4-Methyl-2-Pentanone	5	Ū	5	
Toluene	5	U		U
trans-1,3-Dichloropropene	5	U	. 5	
1,1,2-Trichloroethane	5	U	5	U

#### **UNVALIDATED DATA**

Site: Tank Farm 4

Case: 0288; SDG: E1091

Station Location	Case: 0288; SDG: E		,		
Date Sampled   7/8/98   7/9/98   7/9/98   Date Extracted			_	TF4-MW-TB-02	
Date Extracted   Date Extracted   Date Extracted   Date Analyzed   7/15/98   7/16/98   7/16/98   Dilutton Factor   1   1   1   1   1   1   1   1   1	Station Location				
Date Analyzed   7/15/98   7/16/98		7/8/98		7/9/98	
Dilution Factor	Date Extracted				<u> </u>
Percent Solids         0.0         0.0           QC Identifier         Trip Blank         Trip Blank           1,3-Dichloropropane         5 U         5 U           1,3-Dichloropropane         5 U         5 U           2-Hexanone         5 U         5 U           Dibromochloromethane         5 U         5 U           1,2-Dibromoethane         5 U         5 U           1,2-Dibromoethane         5 U         5 U           1,1,1,2-Tetrachloroethane         5 U         5 U           1,1,1,2-Tetrachloroethane         5 U         5 U           1,1,1,2-Tetrachloroethane         5 U         5 U           Total Xylenes         5 U         5 U           Styrene         5 U         5 U           Bromoform         5 U         5 U           Isopropylbenzene         5 U         5 U           1,1,2,2-Tetrachloroethane         5 U         5 U           1,2,3-Trichloropropane         5 U         5 U           1,2,3-Trichloropropane         5 U         5 U           1,2,2-Tetrachloroethane         5 U         5 U           1,3,5-Trimethylbenzene         5 U         5 U           2-Chlorotoluene         5 U         5 U	Date Analyzed	7/15/98	_	7/16/98	
Trip Blank	Dilution Factor	1		1	
1,3-Dichloropropane	Percent Solids				
Tetrachloroethene         5         U         5	QC Identifier				ļ.,
2-Hexanone	1,3-Dichloropropane				
Dibromochloromethane         5 U         5 U           1,2-Dibromoethane         5 U         5 U           Chlorobenzene         5 U         5 U           1,1,1,2-Tetrachloroethane         5 U         5 U           Ethylbenzene         5 U         5 U           Total Xylenes         5 U         5 U           Styrene         5 U         5 U           Bromoform         5 U         5 U           Isopropylbenzene         5 U         5 U           1,1,2,2-Tetrachloroethane         5 U         5 U           1,2,3-Trichloropropane         5 U         5 U           Bromobenzene         5 U         5 U           n-Propylbenzene         5 U         5 U           2-Chlorotoluene         5 U         5 U           1,3,5-Trimethylbenzene         5 U         5 U           4-Chiorotoluene         5 U         5 U           1,2,4-Trimethylbenzene         5 U         5 U           1,2,4-Trimethylbenzene         5 U         5 U           1,3-Dichlorobenzene         5 U         5 U           1,4-Dichlorobenzene         5 U         5 U           1,2-Dichlorobenzene         5 U         5 U           1,2-D	Tetrachloroethene				1 –
1,2-Dibromoethane         5         U         5         U           Chlorobenzene         5         U         5         U           1,1,1,2-Tetrachloroethane         5         U         5         U           Ethylbenzene         5         U         5         U           Total Xylenes         5         U         5         U           Styrene         5         U         5         U           Bromoform         5         U         5         U           Isopropylbenzene         5         U         5         U           1,1,2,2-Tetrachloroethane         5         U         5         U           1,2,3-Trichloropropane         5         U         5         U           1,2,3-Trichloropropane         5         U         5         U           n-Propylbenzene         5         U         5         U           n-Propylbenzene         5         U         5         U           1,3,5-Trimethylbenzene         5         U         5         U           4-Chlorotoluene         5         U         5         U           1,2,4-Trimethylbenzene         5         U         5<	2-Hexanone				
1,1,2-Tetrachloroethane	Dibromochloromethane				1
1,1,1,2-Tetrachloroethane         5 U         5 U           Ethylbenzene         5 U         5 U           Total Xylenes         5 U         5 U           Styrene         5 U         5 U           Bromoform         5 U         5 U           Isopropylbenzene         5 U         5 U           1,1,2,2-Tetrachloroethane         5 U         5 U           1,2,3-Trichloropropane         5 U         5 U           Bromobenzene         5 U         5 U           n-Propylbenzene         5 U         5 U           2-Chlorotoluene         5 U         5 U           1,3,5-Trimethylbenzene         5 U         5 U           4-Chlorotoluene         5 U         5 U           1,2,4-Trimethylbenzene         5 U         5 U           sec-Butylbenzene         5 U         5 U           1,3-Dichlorobenzene         5 U         5 U           1,4-Dichlorobenzene         5 U         5 U           1,4-Dichlorobenzene         5 U         5 U           1,2-Dichlorobenzene         5 U         5 U           1,2-Dichlorobenzene         5 U         5 U           1,2-Dibromo-3-chloropropane         5 U         5 U	1,2-Dibromoethane				ــــــــــــــــــــــــــــــــــــــ
Ethylbenzene         5         U         5         U           Total Xylenes         5         U         5         U           Styrene         5         U         5         U           Bromoform         5         U         5         U           Isopropylbenzene         5         U         5         U           1,1,2,2-Tetrachloroethane         5         U         5         U           1,2,3-Trichloropropane         5         U         5         U           Bromobenzene         5         U         5         U           n-Propylbenzene         5         U         5         U           2-Chlorotoluene         5         U         5         U           1,3,5-Trimethylbenzene         5         U         5         U           4-Chlorotoluene         5         U         5         U           4-Chlorotoluene         5         U         5         U           1,2,4-Trimethylbenzene         5         U         5         U           1,2,4-Trimethylbenzene         5         U         5         U           1,3-Dichlorobenzene         5         U         5					۰.
Total Xylenes         5 U         5 U           Styrene         5 U         5 U           Bromoform         5 U         5 U           Isopropylbenzene         5 U         5 U           1,1,2,2-Tetrachloroethane         5 U         5 U           1,2,3-Trichloropropane         5 U         5 U           Bromobenzene         5 U         5 U           n-Propylbenzene         5 U         5 U           2-Chlorotoluene         5 U         5 U           1,3,5-Trimethylbenzene         5 U         5 U           4-Chlorotoluene         5 U         5 U           tert-Butylbenzene         5 U         5 U           1,2,4-Trimethylbenzene         5 U         5 U           sec-Butylbenzene         5 U         5 U           1,3-Dichlorobenzene         5 U         5 U           1,4-Dichlorobenzene         5 U         5 U           1,4-Dichlorobenzene         5 U         5 U           1,2-Dichlorobenzene         5 U         5 U           1,2-Dibromo-3-chloropropane         5 U         5 U           1,2,4-Trichlorobenzene         5 U         5 U           1,2,4-Trichlorobenzene         5 U         5 U	1,1,1,2-Tetrachloroethane		1		
Styrene         5 U         5 U           Bromoform         5 U         5 U           Isopropylbenzene         5 U         5 U           1,1,2,2-Tetrachloroethane         5 U         5 U           1,2,3-Trichloropropane         5 U         5 U           Bromobenzene         5 U         5 U           n-Propylbenzene         5 U         5 U           2-Chlorotoluene         5 U         5 U           1,3,5-Trimethylbenzene         5 U         5 U           4-Chlorotoluene         5 U         5 U           4-Chlorotoluene         5 U         5 U           1,2,4-Trimethylbenzene         5 U         5 U           sec-Butylbenzene         5 U         5 U           1,3-Dichlorobenzene         5 U         5 U           1,4-Dichlorobenzene         5 U         5 U           1,2-Dichlorobenzene         5 U         5 U           1,2-Dichlorobenzene         5 U         5 U           1,2-Dibromo-3-chloropropane         5 U         5 U           1,2,4-Trichlorobenzene         5 U         5 U           1,2,4-Trichlorobenzene         5 U         5 U           1,2,4-Trichlorobenzene         5 U         5 U      <	Ethylbenzene		ــــــــــــــــــــــــــــــــــــــ		
Stylene	Total Xylenes		-		1 -
Isopropylbenzene	Styrene		i		
1,1,2,2-Tetrachloroethane         5 U         5 U           1,2,3-Trichloropropane         5 U         5 U           Bromobenzene         5 U         5 U           n-Propylbenzene         5 U         5 U           2-Chlorotoluene         5 U         5 U           1,3,5-Trimethylbenzene         5 U         5 U           4-Chlorotoluene         5 U         5 U           tert-Butylbenzene         5 U         5 U           1,2,4-Trimethylbenzene         5 U         5 U           sec-Butylbenzene         5 U         5 U           p-Isopropyltoluene         5 U         5 U           1,3-Dichlorobenzene         5 U         5 U           1,4-Dichlorobenzene         5 U         5 U           1,2-Dichlorobenzene         5 U         5 U           1,2-Trichlorobenzene         5 U         5 U	Bromoform		٠		
1,2,3-Trichloropropane       5 U       5 U         Bromobenzene       5 U       5 U         n-Propylbenzene       5 U       5 U         2-Chlorotoluene       5 U       5 U         1,3,5-Trimethylbenzene       5 U       5 U         4-Chlorotoluene       5 U       5 U         tert-Butylbenzene       5 U       5 U         1,2,4-Trimethylbenzene       5 U       5 U         sec-Butylbenzene       5 U       5 U         p-Isopropyltoluene       5 U       5 U         1,3-Dichlorobenzene       5 U       5 U         1,4-Dichlorobenzene       5 U       5 U         1,2-Dichlorobenzene       5 U       5 U         1,2-Dichlorobenzene       5 U       5 U         1,2-Dichlorobenzene       5 U       5 U         1,2-Trichlorobenzene       5 U       5 U         1,2,4-Trichlorobenzene       5 U       5 U         Hexachlorobutadiene       5 U       5 U         Naphthalene       5 U       5 U			ļ-		
1,2,3-Trichiloropropane	1,1,2,2-Tetrachloroethane		<del>-</del> -	5	U
n-Propylbenzene         5 U         5 U           2-Chlorotoluene         5 U         5 U           1,3,5-Trimethylbenzene         5 U         5 U           4-Chlorotoluene         5 U         5 U           tert-Butylbenzene         5 U         5 U           1,2,4-Trimethylbenzene         5 U         5 U           sec-Butylbenzene         5 U         5 U           p-Isopropyltoluene         5 U         5 U           1,3-Dichlorobenzene         5 U         5 U           1,4-Dichlorobenzene         5 U         5 U           n-Butylbenzene         5 U         5 U           1,2-Dichlorobenzene         5 U         5 U           1,2-Dichlorobenzene         5 U         5 U           1,2-Dichlorobenzene         5 U         5 U           1,2-Trichlorobenzene         5 U         5 U           1,2,4-Trichlorobenzene         5 U         5 U           Hexachlorobutadiene         5 U         5 U           Naphthalene         5 U         5 U	1,2,3-Trichloropropane				
2-Chlorotoluene         5 U         5 U           1,3,5-Trimethylbenzene         5 U         5 U           4-Chlorotoluene         5 U         5 U           4-Chlorotoluene         5 U         5 U           tert-Butylbenzene         5 U         5 U           1,2,4-Trimethylbenzene         5 U         5 U           sec-Butylbenzene         5 U         5 U           p-Isopropyltoluene         5 U         5 U           1,3-Dichlorobenzene         5 U         5 U           1,4-Dichlorobenzene         5 U         5 U           n-Butylbenzene         5 U         5 U           1,2-Dichlorobenzene         5 U         5 U           1,2-Dichlorobenzene         5 U         5 U           1,2,4-Trichlorobenzene         5 U         5 U           1,2,4-Trichlorobenzene         5 U         5 U           1,2,4-Trichlorobenzene         5 U         5 U           Hexachlorobutadiene         5 U         5 U           Naphthalene         5 U         5 U	Bromobenzene		_		
1,3,5-Trimethylbenzene       5 U       5 U         4-Chlorotoluene       5 U       5 U         tert-Butylbenzene       5 U       5 U         1,2,4-Trimethylbenzene       5 U       5 U         sec-Butylbenzene       5 U       5 U         p-Isopropyltoluene       5 U       5 U         1,3-Dichlorobenzene       5 U       5 U         1,4-Dichlorobenzene       5 U       5 U         n-Butylbenzene       5 U       5 U         1,2-Dichlorobenzene       5 U       5 U         1,2-Dichlorobenzene       5 U       5 U         1,2,4-Trichlorobenzene       5 U       5 U         Hexachlorobutadiene       5 U       5 U         Naphthalene       5 U       5 U	n-Propylbenzene				
4-Chlorotoluene         5 U         5 U           4-Chlorotoluene         5 U         5 U           tert-Butylbenzene         5 U         5 U           sec-Butylbenzene         5 U         5 U           p-Isopropyltoluene         5 U         5 U           1,3-Dichlorobenzene         5 U         5 U           1,4-Dichlorobenzene         5 U         5 U           n-Butylbenzene         5 U         5 U           1,2-Dichlorobenzene         5 U         5 U           1,2-Dichlorobenzene         5 U         5 U           1,2-Dibromo-3-chloropropane         5 U         5 U           1,2,4-Trichlorobenzene         5 U         5 U           Hexachlorobutadiene         5 U         5 U           Naphthalene         5 U         5 U	2-Chlorotoluene	l			
tert-Butylbenzene         5 U         5 U           1,2,4-Trimethylbenzene         5 U         5 U           sec-Butylbenzene         5 U         5 U           p-Isopropyltoluene         5 U         5 U           1,3-Dichlorobenzene         5 U         5 U           1,4-Dichlorobenzene         5 U         5 U           n-Butylbenzene         5 U         5 U           1,2-Dichlorobenzene         5 U         5 U           1,2-Dibromo-3-chloropropane         5 U         5 U           1,2,4-Trichlorobenzene         5 U         5 U           Hexachlorobutadiene         5 U         5 U           Naphthalene         5 U         5 U	1,3,5-Trimethylbenzene		٠.		
1,2,4-Trimethylbenzene         5         U         5         U           sec-Butylbenzene         5         U         5         U           p-Isopropyltoluene         5         U         5         U           1,3-Dichlorobenzene         5         U         5         U           n-Butylbenzene         5         U         5         U           n-Butylbenzene         5         U         5         U           1,2-Dichlorobenzene         5         U         5         U           1,2-Dibromo-3-chloropropane         5         U         5         U           1,2,4-Trichlorobenzene         5         U         5         U           Hexachlorobutadiene         5         U         5         U           Naphthalene         5         U         5         U	4-Chlorotoluene		4-		
Sec-Butylbenzene	tert-Butylbenzene				
p-Isopropylloluene         5 U         5 U           1,3-Dichlorobenzene         5 U         5 U           1,4-Dichlorobenzene         5 U         5 U           n-Butylbenzene         5 U         5 U           1,2-Dichlorobenzene         5 U         5 U           1,2-Dibromo-3-chloropropane         5 U         5 U           1,2,4-Trichlorobenzene         5 U         5 U           Hexachlorobutadiene         5 U         5 U           Naphthalene         5 U         5 U	1,2,4-Trimethylbenzene				
1,3-Dichlorobenzene         5 U         5 U           1,4-Dichlorobenzene         5 U         5 U           n-Butylbenzene         5 U         5 U           1,2-Dichlorobenzene         5 U         5 U           1,2-Dibromo-3-chloropropane         5 U         5 U           1,2,4-Trichlorobenzene         5 U         5 U           Hexachlorobutadiene         5 U         5 U           Naphthalene         5 U         5 U	sec-Butylbenzene				- 1
1,4-Dichloroberzene       5 U       5 U         n-Butylbenzene       5 U       5 U         1,2-Dichlorobenzene       5 U       5 U         1,2-Dibromo-3-chloropropane       5 U       5 U         1,2,4-Trichlorobenzene       5 U       5 U         Hexachlorobutadiene       5 U       5 U         Naphthalene       5 U       5 U	p-Isopropyltoluene				_1_
n-Butylbenzene         5 U         5 U           1,2-Dichlorobenzene         5 U         5 U           1,2-Dibromo-3-chloropropane         5 U         5 U           1,2,4-Trichlorobenzene         5 U         5 U           Hexachlorobutadiene         5 U         5 U           Naphthalene         5 U         5 U	1,3-Dichlorobenzene				
1,2-Dichlorobenzene         5 U         5 U           1,2-Dibromo-3-chloropropane         5 U         5 U           1,2,4-Trichlorobenzene         5 U         5 U           Hexachlorobutadiene         5 U         5 U           Naphthalene         5 U         5 U	1,4-Dichlorobenzene	1		l	-1-
1,2-Dibromo-3-chloropropane         5 U         5 U           1,2-Dibromo-3-chloropropane         5 U         5 U           1,2,4-Trichlorobenzene         5 U         5 U           Hexachlorobutadiene         5 U         5 U           Naphthalene         5 U         5 U	n-Butylbenzene				
1,2-Dibromo-3-chloropropane       5 U       5 U         1,2,4-Trichlorobenzene       5 U       5 U         Hexachlorobutadiene       5 U       5 U         Naphthalene       5 U       5 U					
Hexachlorobutadiene 5 U 5 U 5 U Naphthalene 5 U 5 U					
Hexachlorobutadiene 5 U 5 U 5 U 5 U 5 U					
Mapricialerie					
	Naphthalene			1	
			5 U		5 U

#### **UNVALIDATED DATA**

#### **UNVALIDATED DATA**

Site: Tank Farm 4

Station Location	45-MW-330-02		48-MW-424-02		48-MW-425-01		38-MW-605-01		42-MW-801-01	45-MW-802-01
Station Location	45-MW-330-02		48-MW-424-02		48-MW-425-01	T	38-MW-605-01		42-MW-801-01	45-MW-802-01
Date Sampled	7/8/98	Н	7/9/98	_	7/9/98	<del>                                     </del>	7/9/98	-	7/8/98	7/8/98
Date Extracted	7/10/98		7/13/98	$\vdash$	7/13/98	<u> </u>	7/10/98		7/10/98	7/10/98
Date Analyzed	7/24/98		7/24/98	_	7/24/98	$\vdash$	7/24/98	_	7/24/98	7/24/98
Dilution Factor	1		1	_	1		1		1	1
Percent Solids	00		00		00		0.0		0.0	0.0
QC Identifier	None		Field Dup. 48-MW-424-02		None		None		None	None
4-Methylphenol	10	U	10	U	10	U	10		10 U	I
Phenol	10		10	U	10		10		10 U	
Bis(2-Chloroethyl)ether	10	J	10	U	10		10		10 U	10 U
2-Chlorophenol	10	U	10	υ	10		10		10 U	10 U
1,3-Dichlorobenzene	10		: T	U	10		. 10		10 U	10 U
1,4-Dichlorobenzene	10	U	10	U	10		10		10 U	10 U
1,2-Dichlorobenzene	10		,-,	U	10	1	10		10 U	1
2-Methylphenol	10			U	10	ı .	10	_	10 U	
2,2'-oxybis(1-Chloropropane)	10			U	10		10	_	10 U	1
N-Nitroso-di-n-propylamine	10		10	Ū	10		1	U	10 U	10 U
Hexachloroethane	10	c	10	U	10	Ū	10		10 U	10 U
Nitrobenzene	10	U	10	Ū	10		10		10 U	10 U
Isophorone	10	υ	10	Ū	10		10		10 U	10 U
2-Nitrophenol	10		10	U	10		10	U	10 U	10 U
2,4-Dimethylphenol	10		10	U	10		10		10 U	10 U
Bis(2-Chloroethoxy)Methane	10	υ	10	U	10	U	10	J	10 U	10 U
2,4-Dichlorophenol	10	υ	, , ,	U	10		10	U	10 U	10 U
1,2,4-Trichlorobenzene	10		10	U	10	Ū	10		10 U	10 U
Naphthalene	10	υ		Ü	_	J	10	_	10 U	7 J
4-Chloroaniline	10	-		U	10		10		10 U	4
Hexachlorobutadiene	10		10		10	1	10		10 U	
4-Chloro-3-methylphenol	10		10		10		10		10 U	10 U
2-Methylnaphthalene	10		10		6	1	10		10 U	9 1
Hexachlorocyclopentadiene	10	U	10		10	1	10	-	10 U	10 U
2,4,6-Trichlorophenol	10		10		10		10		10 U	10 U
2,4,5-Trichlorophenol	25		25		25		25		25 U	25 U
2-Chloronaphthalene	10		10		10		10		10 U	10 U
2-Nıtroaniline	25		25		25		25		25 U	
Dimethylphthalate	10		10		10	I	10		10 U	10 U
Acenaphthylene	10		10		10		10		10 U	10 U
2,6-Dinitrotoluene	10		10		10		10		10 U	10 U
3-Nitroaniline	25		25		25		25		25 U	25 U
Acenaphthene	10		2			J	10		10 U	
2,4-Dinitrophenol	25		25		25		25		25 U	
4-Nitrophenol	25	Ü	25	U	25	Ū	25	U	25 U	- 25 U

U - Not detected, UJ - Detection limit approximate, J - Quantitation approximate,

<sup>• -</sup> From dilution analysis, R - Rejected; EB/TB - Equipment/Trip Blank contamination

#### **UNVALIDATED DATA**

Site: Tank Farm 4

Station Location	45-MW-330-02	7	48-MW-424-02		48-MW-425-01		38-MW-605-01		42-MW-801-01		45-MW-802-01	_
Station Location	45-MW-330-02		48-MW-424-02		48-MW-425-01		38-MW-605-01		42-MW-801-01		45-MW-802-01	_
Date Sampled	7/8/98	┪	7/9/98		7/9/98		7/9/98		7/8/98		7/8/98	_
Date Extracted	7/10/98	┪	7/13/98		7/13/98		7/10/98		7/10/98		7/10/98	_
Date Analyzed	7/24/98	$\dashv$	7/24/98		7/24/98		7/24/98		7/24/98		7/24/98	
Dilution Factor	1	┪	1	Г	1		1	_	1		1	_
Percent Solids	0.0	寸	00		0.0		0.0	_	0.0		0.0	_
QC Identifier	None	_	Field Dup. 48-MW-424-02		None		None		None	_	None	_
Dibenzofuran	10	Ū		J	2		10		10	_	1 J	٠.
2.4-Dinitrotoluene	10	Ū	10		10		10		10		10 L	
Diethylphthalate	10	Ū	10	L	10	1	10		10		10 L	
4-Chlorophenyl-phenylether	10	Ü	10	Ü	10		10		10		10 L	_
Fluorene	10		2	L		J	10		10		3 J 25 L	
4-Nitroaniline	25		25				25		25		25 (	
4,6-Dinitro-2-methylphenol	25	U	25		25	1	25	_	25		10 0	
N-Nitroso-diphenylamine	10	υ	10		10		10		10		10 0	
4-Bromophenyl-phenylether	10			Ü	10	.i	10				10 0	
Hexachlorobenzene	10		10	1	10	1_	10		25		25 (	
Pentachlorophenol	25			U	25		25		10		7 5	
Phenanthrene	10			U		J	10		10	I	1 3	-
Anthracene	10	_		U	10		10		10	1	10	Ξ.
Carbazole	10	-		U		U	10	۱.	10	1	10	_
Di-n-Butylphthalate	10			U		U	10	_	10	L	10	_
Fluoranthene	10			U		U	10	1 -	10	1	1	1
Pyrene	10		1			U	10		1	1	10	í
Butylbenzylphthalate	10	<b>-</b>		U		U			l	1	10	
3,3'-Dichlorobenzidine	10	I		Ū		U		۱		U	10	_
Benzo(a)anthracene	10		1	U		U				Ü	10 (	_
Chrysene	10			U		U				_	10	
bis(2-Ethylhexyl)phthalate	10		10		1	U	<u> </u>			Ü	10	
Di-n-octylphthalate		U	10	1		U				U	10	_
Benzo(b)fluoranthene		U		Ū		U				U	10	-
Benzo(k)fluoranthene		U		U		υ		U		U	10	_
Benzo(a)pyrene		U		υ		υ				U	10	15
Indeno(1,2,3-cd)pyrene		Ū				υ		U		U	10	_
Dibenzo(a,h)Anthracene		U		บ				U		U	10	_
Benzo(g,h,ı)Perylene	10	U	10	วไบ	10	ว บ	10	ΙŪ		10	10	-

U - Not detected, UJ - Detection limit approximate; J - Quantitation approximate; \* - From dilution analysis; R - Rejected; EB/TB - Equipment/Trip Blank contamination

#### **UNVALIDATED DATA**

Site: Tank Farm 4

Station Location	48-MW-805-01		45-MW-807-01	Π	45-MW-808-01		48-MW-809-01	TF4-MW-DUP-01	TF4-MW-RB-01
Station Location	48-MW-805-01	_	45-MW-807-01	<u> </u>	45-MW-808-01		48-MW-809-01	TF4-MW-DUP-01	TF4-MW-RB-01
Date Sampled	7/9/98	_	7/8/98	ļ	7/8/98		7/9/98	7/9/98	7/8/98
Date Extracted	7/13/98		7/10/98	<del> </del>	7/10/98	_	7/13/98	7/13/98	7/10/98
Date Analyzed	7/23/98		7/24/98	1	7/24/98		7/23/98	7/24/98	7/24/98
Dilution Factor	1		1	┢	1		1	1	1
Percent Solids	0.0		00	<u> </u>	0.0		0.0	0.0	0.0
QC Identifier	None		None		None		None	Field Dup. 48-MW-424-02	Rinsate Blank
4-Methylphenol	10	Ü	10	Ū	10	Ü	10 U		11.
Phenol	10	υ	10	Ū	10	U	10 U		
Bis(2-Chloroethyl)ether	10	J	10	Ū	10	υ	10 U		
2-Chlorophenol	10	U	10	Ū	10	U	10 U	10 U	
1,3-Dichlorobenzene	10	υ	10	Ū	10	U	10 U		. 1
1,4-Dichlorobenzene	10		10	Ū	10		10 U		I
1,2-Dichlorobenzene	10	U	10		10		10 U		
2-Methylphenol	10	U	10	U	10	U	10 U		
2,2'-oxybis(1-Chloropropane)	10	U	10	Ū	10	U	10 U		
N-Nitroso-di-n-propylamine	10	U	10	υ	10	U	10 U	10 U	
Hexachloroethane	10	_	10	υ	10	U	10 U		
Nitrobenzene	10	U	10	U	10	U	10 U		
Isophorone	10	U	10		10		10 U		
2-Nitrophenol	10		10		10	U	10 U	I	1
2,4-Dimethylphenol	10	υ	10		10	U	10 U		
Bis(2-Chloroethoxy)Methane	10	_	10	1	10		10 U	l	
2,4-Dichlorophenol	10		10	1	10		10 U		
1,2,4-Trichlorobenzene	10		10		10		10 U		
Naphthalene	10		10				10 U	1	
4-Chloroaniline	10		10		10		10 U		
Hexachlorobutadiene	10		10	1	10		10 U		
4-Chloro-3-methylphenol	10	U	10	1	10		10 U		
2-Methylnaphthalene	1	J	10	1	10	U	10 U		
Hexachlorocyclopentadiene	10		10		10		10 U	. 1	
2,4,6-Trichlorophenol	10		10		10		10 U		
2,4,5-Trichlorophenol	25		25		25		25 U		
2-Chloronaphthalene	10		10			U	10 U	_l	
2-Nitroaniline	25		25		25	U	25 U		
Dimethylphthalate	10		10		10	_	10 U		
Acenaphthylene	10		10			υ	10 U		
2,6-Dinitrotoluene	10		10		10		10 U	1	
3-Nitroaniline	25	U	25				25 U		
Acenaphthene	1	7	10		10		2 J		
2,4-Dintrophenol	25		25		25		25 U		
4-Nitrophenol	25	U	25	U	25	U	25 U	25 U	25 U

U - Not detected, UJ - Detection limit approximate, J - Quantitation approximate,

<sup>\* -</sup> From dilution analysis, R - Rejected, EB/TB - Equipment/Trip Blank contamination

#### **UNVALIDATED DATA**

Site: Tank Farm 4

Case: 0288; SDG: I	48-MW-805-01		45-MW-807-01		45-MW-808-01	_	48-MW-809-01		TF4-MW-DUP-01	- I.	TF4-MW-RB-01 TF4-MW-RB-01
Station Location	48-MW-805-01		45-MW-807-01		45-MW-808-01	L	48-MW-809-01		TF4-MW-DUP-01		7/8/98
ate Sampled	7/9/98		7/8/98		7/8/98	_	7/9/98		7/9/98	-	7/10/98
Date Extracted	7/13/98		7/10/98		7/10/98	L	7/13/98	L	7/13/98	4	7/10/98
ate Analyzed	7/23/98	T	7/24/98	Γ	7/24/98	L	7/23/98	L	7/24/98	4	//24/96
Dilution Factor	1		1		1	L	1	L	1	4	00
Percent Solids	0.0	Γ	0.0		0.0		0.0	_	00	-	Rinsate Blank
2C Identifier	None	1-	None	L	None	L	None	_	Field Dup. 48-MW-424-02	_	10
Dibenzofuran	1	J	10		1	U		J	2 .		10
2.4-Dinitrotoluene	10	U	10		1	U			10		2
Diethylphthalate	10	Ū	10	Ū		Ū	10	_	10 (	-	10
4-Chlorophenyl-phenylether	10	U	10			Įυ		U	10 0		10
Fluorene		J	10			J		J	2,		25
4-Nitroaniline	25	Ū		Ū	1	U	25		25		25
4,6-Dinitro-2-methylphenol	25	ίŪ	25	ίĮυ		Ū		U	25		10
N-Nitroso-diphenylamine	10	įυ	10	U		U		U	10	_	10
4-Bromophenyl-phenylether	10	U	10	วไบ	1	U		U		_	10
Hexachlorobenzene	10	ĬŪ	1	Ŋυ	·	U		U			25
Pentachlorophenol	25	υ		5 L		5 U		U	10		10
Phenanthrene		2 1		Įυ		ว บ		U			10
Anthracene	10	υ		įι		ว บ		U	<u> </u>		10
Carbazole	10	บ	1	יןנ		υ	l	U			10
Di-n-Butylphthalate	10	วไบ				o u		U			10
Fluoranthene		บุ		וַנ	·	o u		U			10
Pyrene		วไบ		اد		DU				_	10
Butylbenzylphthalate		วไป		וַכ		0 L		U		_	10
3,3'-Dichlorobenzidine		0 U		_1_				טונ		I	10
Benzo(a)anthracene		οU		ַוַם		0 L		טונ טונ		ـ	10
Chrysene		0 U	·	ַוַם		0 L		טונ			10
bis(2-Ethylhexyl)phthalate		οju		2		0 L		טונ טונ		۰	10
Di-n-octylphthalate		οL	·	0 1		οL		טוכ			10
Benzo(b)fluoranthene		οL		0 1		٥١				4 —	10
Benzo(k)fluoranthene		οl		0 1		0 L		וטוט	' I		10
Benzo(a)pyrene	1	olι	· 1	oli		oli	·	טונ סונ	' l		10
Indeno(1,2,3-cd)pyrene		ōί		0		οl			′ 1	L	
Dibenzo(a,h)Anthracene		oι				0 1		0 L	<u> </u>		
Benzo(g,h,i)Perylene	1	oι	J   1	0	υ  1	0 1	<u> </u>	0 ι	10.	10	

U - Not detected, UJ - Detection limit approximate; J - Quantitation approximate,

<sup>\* -</sup> From dilution analysis; R - Rejected, EB/TB - Equipment/Trip Blank contamination

Aqueous TAL And Dissolved Metal Analysis (ug/l) UNVALIDATED DATA

Site: Tank Farm 4

Station Location	45-MW-330-02		45-MW-330-02F		48-MW-424-02		48-MW-424-02F	Π	48-MW-425-02	Γ	48-MW-425-02F	
Station Location	45-MW-330-02		45-MW-330-02F	Г	48-MW-424-02		48-MW-424-02F		48-MW-425-02	Г	48-MW-425-02F	_
Date Sampled	7/8/98		7/8/98	1	7/9/98	Г	7/9/98		7/9/98		7/9/98	
Date Extracted										L		_
Date Analyzed			<u> </u>									_
Dilution Factor	1		1		1		1	L	1	L	1	_
Percent Solids	0.0		00		0.0		0.0		0.0		0.0	_
QC Identifier	None		None		Field Dup 48-MW-424-02		Field Dup. 48-MW-424-02F		None		None	_
Arsenic	20	J	2.0	Ū	2.0	U	• 2.0	U	2.0	U	3.7	_
Barium	108	В	22	В	17.1	В	21 4	В	24.6	В	22 2	_
Cadmium	19	В	1.3	В	10	Ū	11	В	1.4	В	26	_
Chromium	0 75	В	0 60	Ū	0 60	U	0.60	U	0 60	_	0.60	_
Lead	21	U•	21	U.	21	ŋ,	20	U		-		-
Mercury	0 36		0 09	U	0.10	В	0 09	U	011	В	0 96	_
Selenium	50	C	50	U	50	U	50	U	50	-	50	_
Silver	77	В	70	В	20	U	20	U	86	В	31	8
	Note The "F" in the	ne s	sample number indi	cat	l es the sample was analyzed fo	r d	issolved metals					_
								l		1		

#### **UNVALIDATED DATA**

Aqueous TAL And Dissolved Metal Analysis (ug/l)

Site: Tank Farm 4

Ctation Langtion	38-MW-605-01		38-MW-605-01F		42-MW-801-01		42-MW-801-01F		45-MW-802-01		45-MW-802-01F		48-MW-805-01		48-MW-805-01F
Station Location				_	42-MW-801-01	-	42-MW-801-01F	_	45-MW-802-01	_	45-MW-802-01F		48-MW-805-01		48-MW-805-01F
Station Location	38-MW-605-01		38-MW-605-01F	_		<b>!</b> —		_		_	7/8/98		7/9/98	┢╌	7/9/98
Date Sampled	7/9/98		7/9/98		7/8/98	_	7/8/98		7/8/98		1/0/90		119190	-	173/30
Date Extracted						L		_					<del> </del>	-	<del> </del>
Date Analyzed						_		_			4	_		-	<del> </del>
Dilution Factor	1		1		1	<u> </u>	1	_	<u> </u>		1	_		-	0.0
Percent Solids	00		0.0		0.0		00		0.0	_	00	_	00	<u> </u>	. <del></del>
QC Identifier	None	Г	None		None	<u> </u>	None		None		None	_	None	_	None
Arsenic	2.0	Īυ	2.0	U	25	В	9.9 E	В	10.6		2.0	U		-	2.0
Barium	24.5	<b>↓</b>	242	В	17 6	В	41 3 E	В	98 6	В	16.4	8		-	
Cadmium	23	<b>↓</b>	22	В	14	В	15	В	2.4	В	25	В	1.0	-	1.3
Chromium	0 60		0.60	$\overline{}$	24	В	19.1		32 3		0 60	U	·	_	
Lead	21	<b>-</b>	21	U.	21	u.	21	Ū,	18.7	•	21	υ			20
Mercury	0 09		0 09	_	0 09	U	0 18	В	0 09	U	0.11	В		<del>-</del>	<del> </del>
Selenium	50	<b>↓</b>			50	Ū	50	Ū	5.0	Ü	50	U		٠	<del> </del>
Silver	64	1-	55		43 5	1	183	В	8 9	В	7.7	В	37	В	29
2ll AEI		1	ļ	=-		1				_					
		+	Note: The "F" in th	e s	ample number ind	ıca	es the sample was a	na	lyzed for dissolved	m	netals				
		╁	110.6. 1110 1 111 11	-		Ť	T T	_	<u> </u>		T	Γ			T

#### UNVALIDATED DATA

Aqueous TAL And Dissolved Metal Analysis (ug/l)

Site: Tank Farm 4

Station Location	45-MW-807-01	Π	45-MW-807-01F		45-MW-808-01		45-MW-808-01F		48-MW-809-01		48-MW-809-01F	Ī	TF4-MW-DUP-01
Station Location	45-MW-807-01	Г	45-MW-807-01F	_	45-MW-808-01		45-MW-808-01F	_	48-MW-809-01		48-MW-809-01F	Γ	TF4-MW-DUP-01
Date Sampled	7/8/98	Г	7/8/98		7/8/98		7/8/98	_	7/9/98		7/9/98		7/9/98
Date Extracted												Γ	
Date Analyzed		Г											
Dilution Factor	1		1		1		1		1		1		1
Percent Solids	0.0	Π	00		0.0		00		0.0		0.0		0.0
QC Identifier	None		None		None		None		None		None	L	Field Dup. 48-MW-424-02
Arsenic	2.0	U	20	U	28	В	20	Ū	13.0		56	В	2.0
Barium	13 3	В	78	В	16 0	В	948	В	42 6	В	28.6	В	17.6
Cadmium	18	В	11	В	24	В	10	Ú	17	В	3.7	В	14
Chromium	1.7	В	0 60	Ū	18	В	0 60 (	U	7.5	В	0.60	U	0.70
Lead	21	Ū.	2.1	Ú.	2.1	n.	21	n.	2.1	n.	2.1	U	21
Mercury	0.10	В	011	В	0.10	В	0 09 (	U	0.12	В	0.17	В	0.09
Selenium	50	U	50	U	50	U	50	U	50	Ū	5.0	U	50
Silver	10 3	В	75	В	17 1	В	976	В	38	В	43	В	20
i		-	Note. The "F" in th	e s	ample number indi	cat	es the sample was ar	na	lyzed for dissolved	m	letals	$\vdash$	
		T										Π	

Aqueous TAL And Dissolved Metal Analysis (ug/l)

Site: Tank Farm 4

Station Location	TF4-MW-DUP-01F		TF4-MW-RB-01		TF4-MW-RB-01F	<u> </u>
Station Location	TF4-MW-DUP-01F		TF4-MW-RB-01		TF4-MW-RB-01F	
Date Sampled	7/9/98		7/8/98		7/8/98	
Date Extracted						L
Date Analyzed						₽
Dilution Factor	1		1			<b>∤</b> _
Percent Solids	00		0.0	_	00	╀
QC Identifier	Field Dup. 48-MW-424-02F	L	Rinsate Blank		Rinsate Blank	Ļ
Arsenic	2.0	U	30	В	2.0	4
Barium	189	В	37	В	10	4—
Cadmium	1.0	U	11	В	1.0	4
Chromium	0 60	U	0.80	В	0 60	-1
Lead	21	n,	21	U,	<u></u>	U
Mercury	0.09	В	0 14	В	0 13	4-
Selenium	50	Ū	5 0	U	50	┯
Silver	23	В	19 0	В	138	) B
	Note: The "F" in the sample n	L_ um	ber indicates the			‡
	sample was analyzed for disso	d metals.	L	<u> </u>	⊥.	

Aqueous Total Petroleum Hydrocarbon Analysis (mg/l)

#### **UNVALIDATED DATA**

Site: Tank Farm 4

0400. 0E00, 0D 9. <u>E</u>						
EPA Sample Number	38-MW-605-01	42-MW801-01	45-MW-330-02	45-MW-802-01	45-MW-807-01	45-MW-808-01
Station Location	38-MW-605-01	42-MW-801-01	45-MW-330-02	45-MW-802-01	45-MW-807-01	45-MW-808-01
Date Sampled	7/9/98	7/8/98	7/8/98	7/8/98	7/8/98	7/8/98
Date Extracted	7/12/98	7/12/98	7/12/98	7/12/98	7/12/98	7/12/98
Date Analyzed	7/13/98	7/13/98	7/13/98	7/13/98	7/13/98	7/13/98
Dilution Factor	1	1	1	1	1	1
Percent Solids	0.0	0.0	0.0	0.0	0.0	0.0
QC Identifier	None	None	None	None	None	None
Total Petroleum Hydrocarbons	1.1 (	1.0	1.8	3.6	1.1	U 1.1

### Aqueous Total Petroleum Hydrocarbon Analysis (mg/l) UNVALIDATED DATA

Site: Tank Farm 4

Case, 0200, 3DG, L	48-MW-424-02	48-MW-425-02	Т	48-MW-805-01		48-MW-809-01	TF4-MW-DUP-01	TF4-MW-RB-01
EPA Sample Number		48-MW-425-02	<b>_</b>	48-MW-805-01	_	48-MW-809-01	TF4-MW-DUP-01	TF4-MW-RB-01
Station Location	48-MW-424-02		-1	7/9/98		7/9/98	7/9/98	7/8/98
Date Sampled	7/9/98	7/9/98	-			7/14/98	7/14/98	7/12/98
Date Extracted	7/14/98	7/14/98		7/14/98			7/15/98	7/13/98
Date Analyzed	7/15/98	7/15/98	3	7/15/98		7/15/98	//15/96	1/13/50
Dilution Factor	1			1		1	1	
Percent Solids	0.0	0 (	)	0.0		0.0	0.0	00
QC Identifier	Field Dup. 48-MW-424-02	None	I	None		None	Field Dup. 48-MW-424-02	Rinsate Blank
Total Petroleum Hydrocarbons	17	1 (	υ	15		1.0 L	4.0	1.1

-Aqueous Gasoline Range Organic Analysis (mg/l)

**UNVALIDATED DATA** 

Site: Tank Farm 4

EPA Sample Number	48-MW-424-02		48-MW-425-02		TF4-MW-DUP-01	П	TF4-MW-RB-02		TF4-MW-TB-02	Γ
Station Location	48-MW-424-02		48-MW-425-02		TF4-MW-DUP-01	╗	TF4-MW-RB-02		TF4-MW-TB-02	Г
Date Sampled	7/9/98		7/9/98		7/9/98	ヿ	7/9/98		7/9/98	Γ
Date Extracted						7		_		Г
Date Analyzed	7/21/98		7/16/98	_	7/21/98	$\neg$	7/17/98		7/16/98	Γ
Dilution Factor	1		1		1	ヿ	1		1	Γ
Percent Solids	0.0		0.0		0.0	٦	0.0		0.0	
QC Identifier	Field Dup. 48-MW-424-02		None		Field Dup. 48-MW-424-02		Rinsate Blank		Trip Blank	
Gasoline Range Organics	0.50	U	0 50		0.50	Ū	0.50	U	0.50	Ū